

Emergence of Urban Settlements in North Karnataka – c.300 BC-c.300 AD
with Particular Reference to Sannati

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by

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DECLARATION

I, Hema Thakur, hereby declare that this thesis entitled, 'Emergence of urban settlements in North Karnataka - c.300 BC-c.300 ^{AD} *Shardha Srinivasan* with particular reference to Sannati' is the result of research work done by me under the supervision of Dr Sharada Srinivasan at the School of Humanities, National Institute of Advanced Studies (NIAS), Bangalore. I am submitting this thesis for possible award of the degree of Doctor of Philosophy in Ancient History and Archaeology from the University of Mysore.

I further declare that this thesis has not been submitted by me for award of any other degree/diploma of this or any other University.

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ABSTRACT

Emergence of Urban Settlements in North Karnataka – c.300 BC-c.300 AD with particular reference to Sannati

Urbanization has been studied almost from the middle of twentieth century by historians, archaeologists, anthropologists, sociologists and city planners. An urban center performs specialized functions with respect to the hinterland. In the process of urbanization relatively small settlements and simple communities develop into specialized centers and complex societies. In the case of studies of urbanization from an archaeological or historical standpoint, the major benchmarks often used to contextualize urbanization are location and size of settlements, monumental structures, art, script and coins. The issue of urbanization has been more widely explored in the case of northern India whereas it has been less well-studied with respect to Deccan and Karnataka in particular.

Sannati (taluk Chittapura, district Gulbarga) is the principal site of enquiry. It is a Maurya-Satavahana settlement with some evidence for the megalithic age/iron age. Kanaganahalli and other adjacent sites such as Anegutti, Benagutti, Hasargundgi are well endowed with structural remains of Buddhist affiliation, particularly stupas. In this context the impact of prevailing ideological/religious beliefs on the contemporary socio-political order assumes importance. As may be inferred from Brahmi inscriptions, the Buddhist monastic classes and the paraphernalia depended upon the surplus which was perhaps being appropriated by the landed elite. In the context of early historic Karnataka it is also important to note that a brick structure, possibly a granary was located at Vadgaon-Madhvapur. The available inscriptions hint at the presence of an active elite who were

interested in contributing towards the contemporary religious movements. There were several instances of donation. For instance, in the sixteenth regnal year of Chimukha Satavahana sculpted encasements were donated by a householder Tokhisa. The extremely rich and varied antiquities along with fine sculptures, complex structures are suggestive of the fact that material culture had attained maturity specially with respect to the antecedent cultures. Here the contribution of Mauryas and later the Satavahanas becomes important as they introduced new cultural traits which were adopted by the local communities in their day-to-day life. They had spread into Karnataka from outside but seem to have played a crucial role in facilitating the transition from proto-historic to the early historic. Trade and maritime contacts with the Roman world also provided impetus towards urbanization. In the early centuries of Christian era there were definite indications of social complexity and establishment of a political order and this constituted trends and patterns which seem to have met the yardsticks of urbanization. These yardsticks of urbanization can be identified in North Karnataka, particularly at Sannati around the beginning of Christian era, even when seen in comparison to other early historic landscapes in northern India and the Deccan.

PREFACE

As a young researcher and a historian I have grown to believe that history is a continuously evolving process which is normally characterized by development and progress from one level to the other. However, this process is not always linear and there is a possibility of regression from a relatively advanced stage to a lesser level. History is regarded as evolving but there are distinctive points which are crucial and can be identified as constituting a land-mark. In human history there have been such land-marks and urbanization is one of them. The establishment of a city may be taken as a manifestation of urbanization. I think that urbanization needs to be understood as a complex phenomena which is the result of an interaction of various factors, social, political, economic, technological and ideological. It would be inappropriate to try and stress on any one particular factor as being responsible for bringing about urbanization. Urbanization requires the availability of a large food resource base which can support the non-food producing groups. Further, there is a discernible improvisation in technology particularly metals and crafts. It is quite fascinating that in an urban milieu art and aesthetics flourish and not only the rich but also the less privileged sections give an expression to their feelings. In ancient context specially if not many textual sources are available, a historian has little choice but to rely on archaeology as the main source of information. If archaeology is the primary source for investigating a particular culture, many of the aspects specially concerning the society, ideology, emotions can be comprehended in a rather general manner. However, with the help of material remains one can have more direct information about the technology of a given period.

It has been my observation that in the history of Indian subcontinent the concept of urbanization is normally identified twice, first associated with the Indus valley civilization and later with the age of Buddha in sixth century BC, also known as the age of second urbanization. The Indus valley civilization is easily among the first urban landscapes in the world with several settlements spread across a massive area. It seems to have developed out of early-Harappan though there has been a debate about the influence of foreign civilizations, particularly Mesopotamian. Similarly, the age of Buddha witnessed several small towns and cities spread across the Ganga plains. I somehow feel that despite the potential, in the area of Deccan the concept of urbanization has not been very well located there. The region of Karnataka, particularly North Karnataka has given evidence for almost continuous occupation from pre-historic period onwards. A closer examination of the archaeological settlements and remains shows that there was a growing complexity of culture through the proto-historic and continuing into the early historic. In fact, by the beginning of the Christian era one can locate settlements which seemed to have nearly all the material traits which were comparable with the 'urban' settlements of North India and perhaps the best example of this was Sannati. It was not only rich in the archaeological remains but was also spread across a sufficiently large area which one may consider as constituting an urban landscape. Based on my research work I would like to maintain that there was urbanization in Deccan including Karnataka and it was the outcome of not only external influences but also the local environment and ability of people to absorb new ideas.

In history it is important to understand the nuances of a complex issue and not merely reduce it to simplistic derivations and here having an unbiased approach matters. I have relied a lot on the published excavation and exploration reports

which I have used for preparing the data base but I have interpreted it in my way and to contextualize the information visits to the field and to various museums helped me in having a first-hand account of settlements and material culture. I feel that the area of Deccan which was ruled by successive political houses such as the Satavahanas, Ikshvakus and which has some brilliant structures, art and antiquities needs to be examined on its own merit and in the light of local conditions and not just viewed as entirely benefitting from cultural influences coming from outside.

As a historian I have learnt the importance of reason and logic in the interpretation of facts as available from the tangible remains and as given in the textual sources and I have also understood the need for being sensitive towards the nuances in the writing of historical narrative. I have grown to appreciate that as we try to reconstruct our past, things are not always black and white but there are several shades which one has to recognize and integrate in the results.

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The Ph.D programme was a fine learning experience which gave me many opportunities to learn more about my discipline and familiarized me with many of the facets associated with research that were perhaps not known to me earlier. I met several people from the academics, ranging from Professors to field persons and young researchers like me and I must say that they all introduced me to new dimensions in my work besides bringing some joy and cheer to my life. I would like to thank my supervisor Prof. Sharada Srinivasan for giving me plenty of space to do my research work. She allowed me to explore the many possibilities that are associated with research and this in many ways let my potential come forth. By working with her I got some good opportunities and one such opportunity was the UKIERI Pioneering Metallurgy Project. As a team member working on the Project, I got my first major field experience and many insights into very basic things such as sample collection, classification and labeling of the samples, etc. Based on the work done in the field, I presented a Paper at an international conference in Sri Lanka in 2010.

I would like to extend my thanks to members of the Student Advisory Committee (SAC) that included Prof S Ranganathan (who later left the SAC on account of an official assignment and Prof Narendar Pani came in his place), Prof S Settar and Prof Vibha Tripathi. They guided me in their own quite way and supported me all through the Ph.D programme. I am particularly thankful to Prof S. Ranganathan who was extremely understanding and helped me find my way through many difficulties, both personal and professional. He was always there for me and actually guided me through the tough situations which I would face off and on. I have very pleasant memories of many of the NIAS faculty who did not directly

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Abbreviations

I.A.R

Indian Archaeology – A Review

CHAPTER ONE

1. INTRODUCTION

1.1 Early Historic Karnataka and the problem of urbanization

The region of Karnataka has found mention in sources of great antiquity including Mahabharata and the Puranas where it is referred to as Kuntala. Kuntala in a wider sense signified the whole of the Kannada speaking area comprising the present Karnataka state and the adjoining parts of Maharashtra state. The resource-rich region of Karnataka has been hospitable for occupation and this is quite evident from archaeological settlements and tangible remains that have been recorded since pre-historic times. Imperial powers such as Mauryas and later the Satavahanas ventured into Karnataka perhaps to explore and exploit its sources. These outside powers not only introduced new elements in pottery, coinage, script, art, architecture, etc. but also showed a commitment towards history as reflected by the portrait of emperor Asoka. It would be appropriate to maintain that by the early centuries of Christian era development which had taken place in Karnataka had attained a level where it could be regarded as urban. However, the role of Mauryas and later the Satavahanas needs to be better understood and appreciated and that has been attempted in this research work.

Urbanization has been studied almost from the middle of twentieth century by various scholars, prominent among them being V Gordon Childe (1950), Sjoberg (1960), Mumford (1961), Robert McAdams (1966), A.Ghosh (1973) etc. Urbanization marks a distinctive stage in the evolution of mankind when society was stratified and the class formation was institutionalized and the politico-economic structure was sufficiently matured to produce and redistribute the surplus. City is a manifestation of urbanization. Early cities and states arose

independently in six parts of the world. The earliest state societies in these regions evolved out of simpler societies without major influence from pre-existing states. This process is known as 'primary state formation' (Spencer and Redmond, 2004). Some primary states spread by way of conquest. There were other nearby areas which developed state institutions of their own as a consequence of trade or political competition with established states (Smith 2009, 7). The city may be regarded as an outcome of the process of urbanization. The broad qualifying features of a city are 1) the population is denser in a city as compared to rural areas and is settled in a restricted area 2) only a limited part of a city is, if at all, is used for agriculture 3) the population is predominantly non-agricultural in occupation and is dependent on rural areas for the supply of food and raw materials 4) presence of merchants who would provide the citizens with the necessities of life. On the other hand, in a rural area 1) land would be less restricted 2) food may not be brought from outside 3) comparative self-sufficiency would make the need of permanent population of merchants more limited. According to Arnold Toynbee, "A city is never just a habitat of a crowd that has to buy food by selling something else in exchange for it. Close settlement does not constitute a city unless the inhabitants of the built-up area are citizens in the non-material sense of having, and being conscious of having, a corporate social life....What is essential is that the inhabitants of the city should be a genuine community in fact. The existence of this sense of community, where it exists, is usually proclaimed by the presence of public buildings, a defensive city-wall and towers and gates, a meeting-place..." (Ghosh 1973, 18-19).

The underlying bond between cities and their hinterland is that the survival of cities depends upon their capacity to mobilize and use the agricultural surplus which is produced by the hinterland. It is important that to understand the origins and evolution of urban centers, including the diversity of their institutional

arrangements and physical forms, city and countryside should be dealt as opposed abstractions on an economic plane and also as closely interacting parts of an embracing cultural and ecological systems. In the long-term evolutionary perspective, the growth of cities very closely followed the introduction of agriculture. The major early effect of an agricultural mode of life was the spread of the zones of settled life. Agriculture was rendered more secure as a mode of subsistence and its seasonal cycle and requisite techniques were clearly differentiated from those for hunting and gathering. There was a definite increase in population with the beginning of a relatively more settled life and increasing reliance on agriculture as the primary mode of subsistence. An important feature of urbanism is the beginning of the use of coins. Coinage furthered technology, facilitated exchange and supported networks of economic inter-relationships. It was through these networks that craft products reached wider markets. Cities were junction points or nodes in the appropriation and redistribution of agricultural surplus. Cities were the base from where the new institutions operated. They administered the interrelationships between specialized producers occupying adjacent niches. Cities became the hub for safe storage of the surplus before its use but also for the conspicuous expenditure for public building programs, for the comfortable maintenance of elite and for the enhancement of military power. Now that the early urban centers had wealth, they became both proponents of expansionism and powerful incentives for outside attack. All this resulted in massive fortification becoming a dominant architectural form. The historic role of cities has been as prime creative centers. They could be seats of learning, sources of artistic and philosophic speculation, religious centers and so on. It would be appropriate to believe that the relationship between urban and rural adaptations was not so much about their mutual isolation but of their historic complementarity and interdependence. In the opinion of Robert McC.adams, they are arbitrarily

defined components of a single embracing, cultural-environmental system, each being closely responsive to changes in the other (McCadams 1979, 18-26).

1.2 Theories of urbanization

Gordon Childe's ten point criteria were used primarily to identify urbanization of the bronze age cultures of the ancient world. These included increased size and population, non-food producing population, divine kingship and system of taxation, monumental buildings, elaborate bureaucracy, art of writing and notation, development of science, new direction of art expression, long distance trade, and a sense of community among craftsmen (Childe 1979, 15-17). V.K.Thakur emphasized thirteen criteria with respect to urbanization in ancient Indian historical context. These are dense population, accommodation of non-producing classes, reliance on widely differentiated food resources, strong agricultural hinterland, emergence of ruling class and development of an administrative system, fortification, monumental buildings, invention of writing and numerical notation, emergence of craft and trade organizations and formation of craft and merchant guilds, emergence of a monetary exchange system, foreign trade, a new direction to artistic expression, and a spirit of community among the inhabitants of urban settlements in terms of existing social structure (Thakur, 54-55).

There is a debate among scholars about the factors and conditions which facilitate the rise of urban centers. Sjoberg (1960) attributed a large role to the political factor in the establishment of cities. In his opinion 'large scale economic enterprise is highly dependent on an effective power structure Nowhere do cities, even commercial ones, flourish without direct or indirect support of a well-established state system'. Similarly, Mumford believed 'the most important agent in effecting the change from a decentralized village economy to a highly organised urban economy was the king or rather, the institution of kingship'. Robert McC.

Adams (1966) maintained that the transformation at the core of urbanization lay in the realm of social organization... 'For the most part, changes in social institutions precipitated changes in technology, subsistence, and other aspects of the wider cultural realm, rather than vice versa'. G.Erdosy believed that the crucial indicator for the rise of urban centers lies 'in the development of a hierarchy of settlement types on a regional scale' and therefore regards the 'socio-cultural transformations accompanying the rise of cities as the central issue'. W. Chrystaller placed a good agricultural land with a network of rivers at the hub of his center place theory on urbanization. The first order centers have rich, extensive fertile alluvial plains around which there are found satellite settlements engaged in cultivation of a variety of crops and commodities. The third order centers are located slightly further away. These are resource zones of minerals and provide access to other requirements. A.Ghosh (1973) was of the view that kingship itself, a political system, was the result of an economic system that had developed in the early days of the Bronze age. The technological and economic background that made it possible must be given due consideration. No city, in a non-totalitarian state can live without a supporting merchant class (Tripathi 2008, 155-156). In the opinion of Julian Steward the core was characterized by the structural relationships of interdependent institutions. Each society derives its distinctive set of social systems from its institutional core.

1.3 Karnataka (physical features and human occupation)

The state of Karnataka occupies a prominent position in the South and has been called a rocky triangle. The region of Karnataka is drained by several big rivers, prominent among them being the Krishna, Cauvery, the two Pennars and the Palar. It is a table-land, situated in the angle where the Eastern and Western Ghat ranges converge into the group of Nilgiri hills. West, south and east, it is surrounded by

chains of mountains, on whose shoulders the plateau which constitutes Karnataka rests. The general elevation rises from about 2,000 feet above the sea level along the northern and southern frontiers to about 3000 feet along the central water-parting, which separates the basin of the Krishna from that of the Kaveri and divides the state of Karnataka into two nearly equal parts (Spate and Learmonth 1984, 700-701). Karnataka also has the advantage of having useful rocks and economically viable minerals. That minerals were being sourced is clearly indicated by ancient workings which have been found for the pre-historic, proto-historic and early historic period. The availability of natural sources including fertile soils and favorable climate has promoted human habitation since very early times. In North Karnataka, there is conclusive evidence for continuous occupation from neolithic, through the megalithic and the early historic period. However, the distribution of sources influenced the nature and profile of human settlements, with some settlements depending more on agriculture while others relying on coastal trade.

1.4 Aim and justification for selecting the problem

The aim has been to study the gradual development of urbanization in North Karnataka in the early centuries of the Christian era. There is an analysis of the early historic period in the light of available sources, internal dynamics and impact of external forces. In the course of discussion, region-specific features have been incorporated and closely examined. The process of urbanization unfolded itself in the Indus valley and later in the sixth century BC in the Gangetic plains. The issue of second urbanization has been extensively studied with respect to the Gangetic plains but urbanization in the area of Deccan has not received the same kind of attention, though some scholars such as Aloka Parasher Sen have touched upon it in some of their works. By about 600 BC certain common material traits were

clearly established in the Gangetic plains. These comprised of a steady increase in the use of iron, beginning of cast copper and punch-marked silver coins, growing use of baked brick, establishment of cities and construction of huge defensive structures around many cities. During this period a distinctive pottery, the Northern black polished ware (NBPW) along with the Painted grey ware (PGW) was being used. It is interesting to note that the NBPW is associated largely with the Gangetic sites though small quantity has been found scattered over a wider area. Alongside these developments, heterodox sects such as Buddhism struck roots. An important development in the Gangetic plain was that Mahajanapadas or big cities were established from eighth to sixth centuries BC. The Mahajanapada of Magadha grew at the expense of other Mahajanapadas between the sixth and fourth centuries BC and finally emerged as an empire. The Mauryan polity may be considered as the first major empire in the sub-continent. The Mauryan empire was spread across nearly all of northern India and the Deccan (Morrison 1995; 204, 206).

It is important to note that the area of Deccan by third century BC onwards had also witnessed significant developments which included large brick structures, wide range of pottery including sophisticated Rouletted ware, varied kinds of ornaments particularly beads made of both precious and semi-precious stones, metal objects consisting of both tools and weapons, terracottas, ivory objects, fine sculptures. etc. Furthermore, the use of script was prolific as indicated by the numerous inscriptions and coins. The aim is to explore how from these various facets of material culture the benchmarks of urbanization can be gleaned and the processes and factors associated with it can be discerned. In this light it seems appropriate to explore the potential for urbanization at the major early historic settlements such as Sannati, Maski, Brahmagiri, Chandravalli, Banavasi and Vadgaon-madhavapur. The endeavour is thus to try and understand the

establishment of urbanization in the early centuries of Christian era. The area of North Karnataka has given evidence for almost continuous occupation from neolithic-chalcolithic period through the megalithic and continuing into the early historic and thereafter. The availability of natural sources was a crucial factor that supported human habitation. Thus an attempt has been made to contextualize such development with respect to the availability of local sources, more so as North Karnataka is suitable for agriculture and also well endowed in minerals and useful rocks. Furthermore, an effort has been made to explore the role of religious ideology, the establishment of a stratified society and the over all development of complex culture.

1.5 Past work

Karnataka has a large assemblage of antiquities spanning across pre-historic through the proto-historic to the early historic period. The antiquities were noticed by the British officers in the nineteenth century who perhaps understood their importance and thus managed to put forth tangible evidence for reconstructing the past. Robert Bruce Foote discovered a very large number of ground stone axes in the Karnataka region, in the valley of the river Krishna and its tributaries. His work contributed significantly in establishing Neolithic phase in Karnataka. Ash-mounds, associated with the Neolithic culture complex in Karnataka were first noticed by Col. Colin Mackenzie. They were explored, excavated and investigated by amateur archaeologists and other scholars, prominent among them being Newbold, Cole, Knox and Fawcett, Sewell, Longhurst, Captian Leonard Munn and Sir Leonard Woolley. A large number of megalithic monuments were located for the first time by British officers during explorations. They studied the details of megaliths and funerary appendage and some of them like Colonel Meadows Taylor showed interest in their scientific investigation and analysis. British officers were

among the early observers of art such as paintings executed in rock-shelters. Several of the chance discoveries of Britishers were extremely useful. For example, C. Beadon, a mining engineer, looking for gold in District Raichur, discovered at Maski, the well-known Asokan edict which mentioned the name Asoka as its author. Thereafter, the importance of the site was duly acknowledged and it received more archaeological attention.

The British collected and published inscriptions. In 1796 Col. Mackenzie started copying inscriptions in Southern India and by the twenties of the nineteenth century he had collected nearly nine thousand inscriptions. Elliott copied from different areas more than six thousand inscriptions. However, the maximum work in intensive and extensive study of epigraphic records in Kannada and associated with Karnataka goes to J.F. Fleet and B.L. Rice. These scholars almost simultaneously began the task of systematically collecting and publishing inscriptions. Fleet edited and published inscriptions in Sanskrit and Kannada in a series of articles in the *Indian Antiquary*. Later, he incorporated the results of his researches in Karnataka history and epigraphy in his work *Dynasties of the Kanarese Districts*, published in the *Bombay Gazetteer*, Vol. 1, Part II (1896). Rice did a detailed village to village epigraphical survey of the southern Mysore areas and published twelve volumes of inscriptions, arranged in the order of districts (1886 to 1904). The *Mysore and Coorg from Inscriptions* (1922) was the result of Rice's epigraphic studies. It gives a brief account of the complete history of Karnataka.

1.6 Literature survey in relation to the Indian subcontinent

It seems that there is no one research work that gives a complete account of the early historic period in Karnataka. The aspect of urbanization has been dealt by

some authors but more broadly with respect to Deccan where the early historic settlements located in Karnataka have been taken into account but urbanization specifically in Karnataka is not the focus of their work. Political history of Karnataka during the early historic period has been discussed by P.B. Desai (1970) and by H.V Sreenivasa Murthy and R. Ramakrishnan (1977). P.B. Desai (1970) has mentioned the sources of the prehistoric and historic period in detail. The sources of the early historic period consist of epics, inscriptions, coins, literary works and accounts of foreigners. The discussion on inscriptions is particularly informative and the author has mentioned about collection and publication of inscriptions as well as inscriptions of individual dynasties such as the Mauryas, Satavahanas, Kadambas, etc. There is an account of physical features of Karnataka including geology, soil types, minerals, rivers, crops, forest resources and climate. Pre-history has been touched upon. Excavations of some of the major sites like Arikamedu, Chandravalli, Brahmagiri, Sanganakallu, Maski, Piklihal, T.Narasipur, Tekkalakotta and Hallur have been included. The author has outlined the rule of various dynasties that came to power in the early historic period such as the Nandas, Mauryas, Satavahanas, Chutus, Kadambas, Gangas, etc. The account of the Satavahanas is very detailed and consists of references to their empire, their origin, the number and duration of the rule of various kings and their contribution. H.V. Sreenivasa Murthy and R. Ramakrishnan have discussed literary sources, both Indian and foreign, as well as archaeological sources like inscriptions, coins and monuments. These works provide information on the pre-history and on dynasties which came to power towards the close of the pre-Christian era and beginning of the Christian era. These dynasties comprise of the Nandas, Mauryas, Satavahanas, Kadambas, etc. K.A.Nilakanta Sastri (1975) has given a brief description of various political dynasties that ruled in Deccan and further South from the ancient period through the medieval and later the modern period. He has

also referred to the sources including inscriptions, coins and accounts of foreign travelers. The author has examined the geographical lay-out of the region. It is interesting to note that there is a discussion about pre-history, the racial characteristics of people and the prevalent languages. He has thrown light on the history of the Mauryas, Satavahanas and post-Satavahana dynasties. There is a discussion on the Sangam age and extremely useful information that is given about the dynasties of South and the social, economic and religious conditions. Shrinivas Ritti (1990) has given an account of political history beginning with the Mauryas and continuing into the medieval period upto the Vijaynagar empire. There is a brief discussion about the several dynasties that ruled Karnataka during this period.

There are several scholarly works that deal with urbanization including its features, causes and its lateral expansion. V.Gordon Childe (1979) has linked city with the stage of *civilization* in human history. He has also enumerated ten abstract criteria, all deducible from archaeological data to distinguish the earliest cities from older or contemporary village. Michael E Smith (2009) has discussed in detail the contribution of V.Gordon Childe towards the understanding of the concept of urbanization. He has also thrown light on the debate about urbanization and the issues which various scholars have raised about Childe's ten-point theory. Furthermore, despite many new models he has stressed on the continued relevance of V.Gordon Childe for urbanization. The issue of urbanism including the notion of 'city' which one may regard as a manifestation of urbanization, has been examined by Robert McC.Adams (1979). He has discussed in detail the role of agriculture in the establishment of urban centers. As agriculture developed, there was an increase in population and its density which further promoted urbanization. The article brings forth the inter-connectedness between the 'urban' and 'rural' areas. The author emphasizes that 'city' emerges as a focal point where the surplus

is appropriated and concentrated and used variously by the ruling class and other non-food producing groups. Kingsley Davis (1955) has analyzed the beginning of urban centers and the socio-economic structure which characterizes these centers. A useful article for understanding urbanization, particularly with respect to small limited regions is (2006) by Shweta Sinha Deshpande and Vasant Shinde. There is a detailed discussion about the chalcolithic culture and quite interestingly the authors have traced the beginning of urbanization as early as the mature chalcolithic phase. The urban and proto-urban sites have been identified on the basis of four features including trade, economic specialization, wealth and fortification. The issue of urbanization with particular reference to Buddhist institutions and state has been looked into by Kathleen D.Morrison (1995). The author has delineated the role of political powers including Mauryas and Satavahanas and maintains that the latter contributed significantly towards construction of Buddhist monuments. Further, in the early centuries of Christian era there was expansion of agriculture and a growth in craft production and exchange. Buddhist institutions were liberally supported by the trading class, craftsmen as well as the farming community. In the article it has been stressed that the Buddhist philosophy is generally supportive of urban institutions and is congenial for typical urban milieu.

Andrew M.Bauer, Peter G. Johansen and Radhika L. Bauer (2007) have explained the process of development through the neolithic, megalithic and the early historic with ecology in the backdrop. A. Ghosh (1973) has examined in detail the concept of *city*. The author has thrown light on the debate about possible factors which contribute towards the establishment of urban centers. It is interesting to note that the author has outlined description of city in ancient literature. Furthermore, there is mention of several settlements such as Attranjikhera, Taxila, Sisupalgarh, Kausambi which have been regarded as cities in the ancient period and the

diagonstic features on the basis of which urbanization has been established. In an article() he has deliberated upon the beginning of urbanization in North India and while doing so he has taken into account the use of iron and the plough and has included discussion on the later vedic age which preceded the onset of urbanization in sixth century BC. S.P. Gupta (1973) has discussed urbanization in the Indus valley civilization in six distinct stages namely genesis, formative, efflorescence, affluence, quiescence and dispersal. Furthermore, (1974) he has tried to analyze urbanization with respect to the social structure. In his opinion consolidation of the society in terms of the caste system and its legitimization in the sixth century BC contributed significantly towards urbanization. D.K. Chakrabarti (1974) has touched upon the views of various scholars about *urbanization* and its many facets. He has briefly discussed the origin of urbanization in the Indus Valley, the contribution of political power in the consolidation of early historic cities and the usage of the term 'urbanization' in the Indian context. D.K. Chakrabarti (1984-85) has mentioned two phases of urbanization in the Indian context – the Indus valley civilization in the third millennium BC and urbanization in the Gangetic plains in sixth century BC. He has impressed on the role of iron in agricultural and craft activities and sustaining new settlements but is of the view that the role of iron in bringing about urbanization was not so significant. According to him, the urbanization of the Gangetic valley was more because of the growth of organized political power structures in the region around or before 600 BC. In yet another work (1997) he has dealt with urban morphology during the early historic period. M.C. Joshi (1974) has stressed on the role of economic factors, particularly that of monetization in the rise of urban centers. Vijay Kumar Thakur (1978) has discussed the concept of urbanization with respect to Gordon Childe's ten-point theory. He has also mentioned the views of A.Ghosh and D.K.Chakrabarty who have emphasized the importance of political and social factor respectively. The

author maintains that the use of iron was crucial in bringing about urbanization, specially in the Gangetic plains. The author has discussed the nascent beginning of urbanization during the Later Vedic Period. Vijay Kumar Thakur (1981) has discussed the views of many scholars about urbanization including that of V.Gordon Childe. The author has listed the traits of urbanization in the early Indian context. He has also mentioned the reference to urban settlements in ancient literature such as Arthashastra, Indica, etc. There is a very comprehensive list of socio-economic, political and ideological factors which according to the author gave birth to urbanization. There is detailed discussion about the urban economy with particular emphasis on various industries and crafts. Furthermore, there is reference to the different social groups that would live in the urban centers. The decline of urban tradition in the Gupta and post-Gupta period has been examined and attributed to natural calamities and political and economic factors. Santosh Kumar Singh (2010) has discussed the pre-urban settlements of the middle Ganga plain as well as the urban settlements. He has also taken into account the contribution of iron in the beginning of urbanization.

R.S. Sharma (1983) has undertaken a detailed analysis of social and economic conditions in the early and later vedic period. The author has touched on several aspects including redistribution of surplus and social stratification and the various ways in which it was institutionalized and justified. There is a very comprehensive discussion about the factors which contributed towards socio-economic and cultural complexity beginning from the vedic period and continuing into the sixth century BC. There is information about the concept of 'property' which started in the early vedic period and got more consolidated with time. He has stressed on the 'mode of production' for materialist explanation of history as well as for understanding social developments. Further, in another work (1987) he has

discussed urban decay and consequent ruralisation of Karnataka, as in many other regions of India, in the post-Gupta period.

Among the most useful works for the study of coins of Karnataka are by A.V. Narasimha Murthy. In one of his works (1975) there is a detailed account of punch-marked coins, coins of Maharathis, Anandas, Satavahanas, Kadambas, Roman coins, etc. The author has touched various facets such as the distribution of coins, their number, weight, size, metal, obverse and reverse, stratigraphic position and chronology. In yet another work A.V. Narasimha Murthy(1996) has examined punch-marked coins, coins of Maharathis, Anandas, Satavahanas, Kadambas, Romans, etc. There is detailed discussion pertaining to the Roman coins and their find spots. Information is available on the Roman coin moulds recovered from Banavasi and Talkad. Coins of the Anandas are important as they are known only from their coins. One of his works (1987-88) is notable for its precise account. The author has described the important excavated sites and has given details about the brick structures, Russet coated kaolin painted ware and terracotta figurines. There is discussion on the coins of various dynasties such as Chutus, Maharathis, Satavahanas, Kadambas, Gangas, etc. and also a brief survey of the works that have been done on the coins of Karnataka. He has stressed on the importance of epigraphical and literary data for the study of coins. A.V.Narasimha Murthy (1987) has also discussed mints in Karnataka and mentioned the mint towns such as Lakkigundi, Hemagiri, etc. He has briefly referred to the minting activity under later dynasties including Hoysalas, Sevunas, Vijaynagar rulers and Bahamanis. Nisar Ahmad (1988) has examined the distribution of punch-marked coins in Karnataka with particular reference to Chandravalli, Banavasi and Vadgaon-Madhavapur. In his discussion he has mentioned about hoards of coins from Gulbarga and Chikka Sindogi.

I.K.Sarma (1980) has given a brief but extremely useful information about the Satavahanas touching upon the name of the Satavahanas, their caste, their religion and language and original home. He has also discussed their struggle for rise to power, chronology, etc. There is detailed account of the relatively new discoveries of the Satavahana coins including metrology, technique, shape, weight and size, symbols. Silver coins of the Satavahanas have been examined at length. It is important to note that there is a section devoted to the corpus of the Satavahana coins. I.K.Sarma and J.Varaprasada Rao (1993) have studied in detail the Asokan inscriptions discovered from the Kalikamba shrine. The authors have given full text of the inscriptions and their translation. Furthermore, there is mention of other Brahmi inscriptions recorded at Sannati. There is a brief account about the Satavahana coins. There is interesting information concerning Buddhism in Karnataka including Tantric Buddhism. D.C.Sircar (1957) has given an outline about the region of Magadha and the Mauryas and has provided a lengthy description of emperor Asoka and his inscriptions. The work is useful as there is a translation of Asokan inscriptions.

The articles by Sudharshan Seneviratne (1981, 1995) and B.D. Chattopadhyaya (1987), are extremely useful for understanding the process of state formation and the emergence of complex society in the early historic period. Aloka Parasher-Sen (1993) has analysed historical process including aspects of urbanization in the beginning of the Christian era. In yet another work (1999) she has approached the issue of urbanization in a very comprehensive manner. She has stressed on the importance of ecological background for understanding the process of urbanization. Further, the link between antecedent cultures particularly megalithic and early historic urban settlements has been highlighted. She has explored the use and possible impact of iron in detail and cautioned about over-emphasising its importance.

Amita Ray (1983) has included archaeological data from Karnataka into the general arguments. But Karnataka as a region is not the focus of her discussion. The close relationship between ecology and settlement pattern has been closely examined by Himanshu Prabha Ray (1986, 1989). C. Margabandhu (1990) has given a concise account of megalithic material remains including their food, economy and ideological beliefs. The author has tried to locate the early beginning of urbanization in the megalithic period itself. Some of the major early historic settlements such as Dharanikota, Nagarjunakonda, Kavripampattinam, Arikamedu, Banavasi, etc. are mentioned and the archaeological assemblage found there has been discussed. Shrinivas Ritti (1989) has dealt with the spread of Buddhism in Karnataka and prominent centers of Buddhism such as Banavasi, Sannati, Hampi, etc. He has discussed the status of Buddhism during Satavahana and post-Satavahana period and has mentioned the decline of Buddhism under Chalukyas of Kalyani and Rashtrakutas and later on its resurgence. It seems that there is no major work concerned with the over all development of Karnataka and urbanization in particular in the early historic period. In the followings chapters the material evidence would be examined in the light of the criteria discussed by scholars in terms of identifying features that can be described as urban.

1.7 Approach and methodology

V.Gordon Childe is one of the earliest scholars who has examined the issue of urbanization and has given a comprehensive list of ten parameters for identifying urbanization in the ancient context. The yardsticks as provided by him seem to be all encompassing and as a result have been adopted by several archaeologists and historians to establish the urban nature of settlements. In many of the works on urbanization in ancient India there is reference to the antecedent cultures and

whether there is any link between them and urbanization as it unfolded later. There is no consensus on the causal factors and the relative importance of social structure, political organization, ideology in bringing about urbanization has been debated upon by many authors.

In this thesis an attempt has been made to understand the relation between local geographical conditions and human settlements. The region of Karnataka and particularly North Karnataka has given evidence for almost continuous occupation from neolithic-chalcolithic period into the megalithic, early historic and historic. The availability of fertile soils, perennial rivers, metals and minerals encouraged human communities and made possible the production of surplus which could support the non-producing classes and other urban institutions. The major early historic settlements in Karnataka were preceded by the megalithic or were found over-lapping with the megalithic. The author in this thesis has tried to elucidate that the developments in the megalithic period had reached a level where people could assimilate new influences and absorb fresh ideas. In the early centuries of Christian era there was conclusive evidence for craft specialists and other non-food producing classes. An effort has been made to stress on the importance of social stratification and its justification on an ideological plane and the manner in which it contributed to social and cultural complexity which characterized the urban milieu in the early centuries of the Christian era.

As part of research work the author has done archival research and reviewed literature which is available on the early historic period. This is important to understand the manner in which main issues have been identified and addressed by various scholars. The literature that has been used for the research work includes excavation and exploration reports. The major excavation reports that are included are by K.P.Poonacha (2011), J.R.Howell, G.V.S.Rao, J.V.P.Rao and Annie Howell (1995), D.V.Devaraj and H.T.Talwar (1996), B.K. Thapar (1957),

R.E.M. Wheeler(1948), M.H. Krishna, A V Narasimha Murthy (1997). These reports provide insights into the actual site and its immediate environment. Information about provenance and context of the artefacts helps in preparing historical narrative. The methodology adopted centers on preparing a database of artefacts found in archaeological excavations and explorations.

The archaeological remains are the main tangible evidence which is available for understanding the history of the early historic period in Karnataka. In this work it has been author's endeavour to establish that the major early historic settlements in Karnataka had reached a level where they may be regarded as urban. This has been done with respect to five parameters, namely size of the settlement, pottery, aesthetics, coins and inscriptions. Pottery has important dimensions like fabric, shape, surface treatment/decoration. These reveal details about the food habits, the storage practices of the people, etc. Further, pottery also provides indications of external exchange. For instance, the presence of Rouletted ware is taken as an evidence of contacts with the Roman world. Sculptures and terracottas give insights into the aesthetic sense that the people of that age had come to develop. Coins give details about the political/administrative authority that was in power and hint at the monetization of economy. Furthermore, Roman and Byzantine coins give information about foreign trade. Inscriptions are useful for understanding the socio-religious classes which existed. The information which is collated from the above-mentioned sources has been contextualized both in relation to the preceding megalithic period and outside influence brought by the Mauryas and Satavahanas and a historical narrative has been prepared to establish the emergence of urban centers in North Karnataka in the early centuries of the Christian era.

1.7.1 Field-visit

The research problem has been deliberated upon with reference to six major early historic settlements. These include Sannati, Maski, Brahmagiri, Chandravalli, Vadgaon-Madhavapur and Banavasi. Vadgaon-Madhavapur and Banavasi are well-outside North Karnataka but they have been included as they are rich in the remains of early historic period. These sites are important and their excavation has given substantial information about the early historic period. As these sites hold the potential for being the early urban centers the researcher visited them to have a first-hand account of their location and immediate surroundings. The sites were then mapped to help in understanding the lay-out of the settlements and their position in relation to the general geographical setting.

The antiquities collected over the years are kept in various Government Museums located at Bangalore, Gulbarga, Chitradurga and other institutions like the Kannada Research Institute (Dharwad), National Museum (Delhi). The antiquities have been documented and a data-base prepared. The material assemblage of the early historic period includes pottery, building material such as bricks and tiles, stone tools, metal artefacts, ornaments comprising of beads, bangles, rings, terracottas, sculptures, coins and inscriptions. The approach is to study these archaeological artefacts very closely and draw out information which can contribute towards the understanding of the research problem.

1.8 Sources

Archaeological material, both excavated and explored, is the main evidence as there is a paucity of literary sources for early historic Karnataka. The archaeological data has been supplemented and cross-checked by numismatic and epigraphic evidence. Archaeology provides information in a stratified context and helps to locate developments in time, while coins and inscriptions throw light on

aspects of economy and society which are not always easily known from archaeological artefacts. Archaeology gives significant insights into urban activities, crafts, day-to-day material life while coins may indicate depth of monetization and external mercantile activities. Similarly, inscriptions reflect on guild organisation, donations, benefactors and beneficiaries.

1.9 Chapterization

As indicated in the above introduction to the problem of urbanization there is a paucity of studies related to the early historic period with respect to the problem of urbanization, although it has been better explored in relation to the Gangetic valley. The aspect of urbanization has been examined through multi-disciplinary approach in the following chapters drawing upon material culture, geographic setting, inscriptional and epigraphic evidence, artistic output and remains of significant features such as structures, fortification and so on. The thesis has been organised into seven chapters. In the first chapter of Introduction, there is discussion about urbanization, the literature that is available for early historic Karnataka, justification for selecting the particular problem, my aims and objectives, sources which I have used, my approach and methodology. In Chapter two on Geography and Environment a discussion on the geographical features has been included so that the developmental process can be examined in the light of the resource base. In Chapter three the dynasties that reigned during the early historic period in Karnataka have been mentioned. In Chapter four on Early Historic Archaeology the chronology and sites of the early historic period have been looked into. There is a detailed discussion of the data of excavated and explored sites and an analysis of material remains. Chapter five is on Sannati which is the main early historic settlement that the author is investigating. There is a very detailed account of several aspects such as derivation of the place name,

chronology, location and surroundings, physical lay-out, adjoining settlements, exploration and excavation work done at Sannati, antiquities found, structures specially the stupa, sculptures, inscriptions, coins, Mauryan and Satavahana rule, trading activity, decline of the settlement, etc. In Chapter six there is a discussion on urbanization and urban centers in North Karnataka. Major early historic settlements such as Maski, Sannati, Brahmagiri, Chandravalli, Vadgaon-Madhavapur and Banavasi have been examined in detail along with field observations. An attempt has been made to establish that culture in North Karnataka had attained a level where it could be termed as 'urban'. The possible nature of the six major settlements has been discussed. The last chapter is the Conclusion where there is an attempt to synthesize the information related to the early historic culture in North Karnataka and establish patterns which seem to emerge that could point to the process of urbanization.

CHAPTER TWO

2. THE GEOGRAPHICAL SETTING

2.1 Introduction

The geographical setting helps in understanding the settlement pattern and resource base that may have supported human communities through centuries. The distribution and exploitation of geographical resources have influenced human colonies and regulated the manner in which they have concentrated in “zones” and “sub-zones” right from the neolithic-chalcolithic period, through the megalithic eventually leading up to the establishment of early historic settlements. In this chapter the location of Karnataka and particularly the physical configuration of North Karnataka have been discussed and the historical development of Karnataka as a geographical unit has been outlined. There is ample evidence in the literature of the ancient period for the evolution of the geographic region of Karnataka. The territory of Karnataka where Kannada was spoken as a common language was broadly defined by the twelfth century. Karnataka shares border with more than one state. The state of Maharashtra adjoins northern Karnataka. Andhra Pradesh and east Karnataka share a common border. Though these neighbouring states have some common features with Karnataka, it is the rivers which tie them more closely to each other. Some of the important rivers originate in adjoining states and flow in Karnataka or vice-versa. The drainage of Karnataka is based on three notable rivers - Krishna on the north, the Kaveri on the south, the two Pennars (North Pennar and South Pennar) and the Palar on the east. The drainage of Karnataka is discussed in detail as settlements from the neolithic period onwards are located close to the rivers and rivers played a crucial role in sustaining human habitation. Similarly, Karnataka enjoys the benefit of numerous mountain ranges. Mountains are a

source of economically viable rocks and minerals. There is evidence for the exploitation of metals and minerals since prehistoric period. Other important geographical aspects which may have had a bearing on the historical development such as soil types, flora and fauna, climate, etc. are examined in detail in this chapter.

There is a close relationship between man and environment and environment influences the course of development of a given region. This premise is supported by the historical development of Karnataka. North Karnataka has given evidence for human habitation beginning with the neolithic-chalcolithic period, continuing into the megalithic and the early historic and historic period. There was a steady growth in cultural complexity as well as an expansion in human settlements and this was made possible by the local availability of sources. Fertile soils, rivers for irrigation, minerals and rocks full-filled the basic needs of human communities and there was an exchange network to procure all those things which were not locally available. Rich archaeological assemblage is a testimony of supportive environment and congenial local conditions which encouraged human colonies through the centuries.

2.2 Reference to Karnataka in ancient literature

Daksinapatha is the territory lying to the south of Mahishmati identified with Mandhata according to the Kavyamimamsa. The Dharmasatras maintain that Daksinapatha lay to the south of Paripatra, generally identified with a part of the Vindhyas. According to the Mahavagga of the Vinaya Pitiaka and the Divyavadana Dakshinajanapada lay to the south of the town of Satakarnika. Buddhaghosa, the famous Buddhist commentator, defines Daksinapatha or the Deccan as the area lying to the south of Ganges (Sumangalavilasini, 1, 265). The

area lying to the south of the Ganges and to the north of the Godavari is known as Daksinapatha according to the *Suttanipata* (Prologue of Bk.V.; Vinaya - Mahavagga, V, 13; Vinaya - Cullavagga, XII.1). The Sanskrit Buddhist texts mention Daksinapatha as having extended southwards beyond the river and the Paripatra mountain (Law 1976).

Dakshinapatha included the territories of the Pandya, Kerala, Cola, Maharashtra, Mahishaka, Kalinga, Paunika, Maunika, Asmaka and Kuntala or Karnata. The name Karnata is found in Jambukhanda of *Mahabharata* and the *Brihatsamhita* of Varahamihira (sixth century CE). The word Karnata seems to have been the same as the word Kuntala. Karnata is mentioned several times in the Puranas. It is also found in the Sanskrit play *Mricchakatika*. King Pulikesi is known to have been proud of his Karnataka armies. According to a tradition, a Daitya, called Karnata, is said to have established Karnata after his name, on the shores of the (western ?) ocean (Skanda, 3 Adh. 18-19) (Karmarkar 1938 ; 780-781, 786). Kuntala in a wider sense denoted the whole of the Kannada speaking area covering the present Karnataka state and the neighbouring parts of Maharashtra state. Kuntala and Karnataka appear as synonymous in the *Vikramankadevacharita* of Bilhana. Kuntala is repeatedly mentioned in the inscriptions. In a record from Shimoga district dated 1077 CE Banavasi has been regarded as an ornament of the Kuntala country (Gai 1981, 9). The country called Kuntala is mentioned in an Ajanta cave inscription of fifth century CE and in Baiaghat plates of Prithvisena II, as well as in Pandurangapalli grant of the Rashtrakuta king Avidheya. The Kuntala people mentioned in the last of these records were the Kadambas of Vanavasi (Banavasi) who reigned in the North Kanara district and parts of the Mysore, Belgaum and Dharwar districts. Vijayanti or Banavasi was the initial capital (*tilaka*) of the Karnata country. Gautamiputra Satakarni released one of his Nasik inscriptions from Vijayanti.

The country known as Vanavasa or Vanavasi is referred to in some of the Nagarjunikonda inscriptions of the fourth century CE. The region corresponded to the area around modern Banavasi in North Kanara district. The Mykadoni inscription of Pulumavi mentions the district called Satavahani-*hara*. It has been identified with the territory covering the Bellary and Adoni taluqs of the Bellary district, Mysore (Gupta 1973). That the northern limit of Karnataka stretched upto the Godavari is shown by the statement in *Udayasundari katha* of Soddhala that Pratishthana i.e. modern Paithan on the Godavari was the capital of Kuntala. A Sanskrit work known as *Kuntalesvaradautya* which is attributed to Kalidasa has certain passages which hint that Kalidasa was sent by the Gupta king Chandragupta II as an ambassador to the court of the lord of Kuntala. Some inscriptions of the Vakataka kings contain occasional references to Kuntala. Rajasekhara, the author of *Balaramayana*, appears to identify Kuntala with a part of Maharashtra, including Vidarbha. The *Vayu* and the *Markandeya* Puranas mention Kuntala along with Maharashtra, Vidarbha and Asmaka and show them as being part of south (Gai 1981,10-11). Fleet after a study of many inscriptions maintains that Kuntala included the region of south Banavasi in North Kanara, Balagamve and Harihar (in the Shimoga district of) Mysore, and Hampe or Vijayanagara in the Bellary district. To the north of these places it comprised of Hangal, Lakshmeshwar, Lakkundi and Gadag in the Dharwar district; further to the north, Belgaum, Saundatti, Manoli and Konnur in the Belgaum district and Pattadakal and Aihole in the Bijapur district; and yet further more to the north Terdal in the Sangli state, Bijapur itself and also Kalyani. Kuntala by the twelfth century began to denote almost the whole of the Karnata country.

Karnataka has originated from the word “Karnad”. “Kar” in Kannada means black and “Nadu” means country or region, in other words, “the land of black soil”. In ancient times, the whole of southern Deccan, including a large part of present

Tamil Nadu was called Karnataka or Karnad and the language and the people were known as Kannada and Kannadigas respectively (Singh 1971). On the basis of location of the Kannada inscriptions known to exist and from the information of literary statements, it becomes clear that Kannada language was current in the area at least in and from the ninth century CE, bounded on the north by the Godavari, on the east by the Vengi-*Vishaya* (approximately Guntur and Krishna districts) of the eastern Chalukyas, on the south by the Cauvery river and on the west by the Arabian sea, adjoining the strip of Konkan. The northern and eastern limits have over centuries been reduced to the Bhima on the north and to the Karnul and Anantpur districts on the east. The southern boundary has also been constricted (Panchamukhi 1955). Karnataka was also called Mysore. The name “Mysore” is that of the capital, Maisur, for Mahishur (from *mahisha*, Sanskrit for *buffalo* reduced in Kanarese to *mais* and *uru*, Kanarese for *town* or *country*) which denotes the destruction of Mahishasura, a buffalo headed monster, by Chamundi or Mahishasura Mardini, the form under which the consort of Siva is worshipped. In the opinion of L. Rice Mahisha-*Mandala* may be applied to south of Mysore. The name Mysore-nad is found in a grant of the third century CE. In the Buddhist literature there is reference to different similar names such as Mahisha-rattha, Mahisha-*Mandala* or Mahishaka-*Mandala*. Mahisha-*Mandala* is said to have included a borderland of Buddhist Middle country. Mahisha-*vishaya* of the Kadamba grant seems to apply to some parts of the state of Mysore (Gupta 1973).

2.3 Physical configuration of Karnataka

The state of Karnataka is located in the south of India and has been called a rocky triangle. It is a table-land, situated in the angle where the Eastern and Western Ghat ranges meet into the group of the Nilgiri hills. To the west, south and east it is enclosed by chains of mountains, on whose shoulders the plateau which

constitutes the state lies. The general elevation rises from about 2,000 feet above the sea level along the northern and southern frontiers to about 3000 feet along the central water-parting, which divides the basin of the Krishna from that of the Kaveri and splits the region of Karnataka into two nearly equal parts. The face of the country is everywhere undulating, marked by lines of rocky hills or lofty mountains and scored in all parts by deep ravines. The region of Karnataka stretches from the Deccan lavas on the north to the Moyar in the south. The western limit is the Ghats crests and to the south-east the border hills and scraps of the Mysore plateau provide a fairly sharp boundary between the Moyar and the Palar. It seems that the region of Karnataka covers the area in which Kannada or Kanarese speech is dominant. However, the lower levels of the Raichur Doab and Anantapur district show affinity with Telengana. Karnataka covers 74,210 sq. miles (1,92,204 sq. Kms) and is almost two and a half times as large as the old princely state, incorporating Coorg; South Kanara and Bellary from Madras; North Kanara, Belgaum, Bijapur and Dharwar districts from old Bombay; Raichur, Gulbarga and Bidar from Hyderabad (Spate and Learmonth 1984). Karnataka shares border with several states. The state of Maharashtra touches northern Karnataka. Maharashtra is a large and homogeneous region ($15^{\circ} 44'$ - $21^{\circ} 40'$ N and $73^{\circ} 15'$ - $80^{\circ} 33'$ E). Andhra Pradesh and east Karnataka have a common border. The Andhra Plateau ($12^{\circ} 14'$ - $19^{\circ} 54'$ N and $76^{\circ} 50'$ - $81^{\circ} 50'$ E) comprising a major part of Andhra Pradesh, is spread over 2,04,882 km². Tamil Nadu and Kerala, on the south of Karnataka, cover an area of 74,254 km². This region occupies a significant position as it is a joining link between the Western coast and Coromandal coast (Singh 1971).

2.3.1 River System of Karnataka - Though these neighbouring states share some common features with Karnataka, it is the rivers which link them more closely to each other as some of the important rivers originate in neighbouring states and

flow in Karnataka or vice-versa. The drainage of Karnataka is based on three major rivers - Krishna on the north, the Kaveri on the south, the two Pennars (North Pennar and South Pennar) and the Palar on the east. Along with the three river systems, Godavari and its tributaries also flow through the state in the north. Few streams join the Sharavati and flowing down the Ghats in the falls of Gersoppa meet the Arabian sea. One of the three important rivers which flow in Karnataka is the Krishna-the other two being the Cauvery and the Godavari. All the three originate in the west and flow across the peninsula. River Krishna with its tributaries commands largest drainage area and it is responsible for the prosperity of three states-namely Karnataka, Maharashtra and Andhra Pradesh. Krishna is mentioned frequently in the literature of the early period. The Puranas refer to it as Krishnavenya or Krishnavena. In Jatakas it is known as Kanhapenna and in the Hathigumpha inscription of Kharvela it is mentioned by the name of Kanhapemna. The Skanda, Padma and Brahma Puranas mention benefits which accrue to people who live in the vicinity of the banks of this river and consider it to be the mother of rivers and as the fountain-head of the holy places (Gazetteer of India, Mysore State , Bijapur District 17). The Skand Purana has a section known as Krishna Mahatmya devoted to the glorification of the Krishna river (Gazetteer of India, Mysore State , Gulbarga District 14). According to Dr. Pandurangarao Desai, Ptolemy mentioned this river, at least in its lower course, as Maisolos, a name which has continued in the modern Masulipatam. The Krishna is also known as Hire-hole (big or great river) in the region, and old Kannada inscriptions call it Perddore which has the same meaning (Gazetteer of India, Mysore State , Raichur District 10). Krishna is born among the Mahabaleshwar section of the Sahyadri hills. Flowing through the Maharashtra state, it steps into Karnataka near Ainapur village in Belgaum district. From Karnataka, it gets into Andhra Pradesh, near Deosugur village in Raichur district. It has a fall of about two hundred feet,

nearly one and a half to two miles downstream of Narayanapur village in Shorapur taluk. The fall is famous as Jaldurga falls. Krishna is a perennial river with a rough and stony bed and has islands in it. During rainy season when it overflows its banks, its waters enrich the soil with a deposit of natural manure which produces a good crop. River Bhima meets this river to the north of Kadlur in Raichur taluk. The Krishna joins Ghataprabha near Chimalgi and the Malaprabha at Dhannur. Almost fifteen major and twenty one minor streams and nalas flow into the river - important are the Hutti, Chiksugur, Ramdurg, Mandargi, Hirebudur, Timmapur, etc.

One of the important tributaries of the river Krishna is the Bhima. Bhima is referred to in the Matsya, Brahma and Vamana Puranas. It also finds place in the Mahabharata. It is considered to be a sacred river and spoken of as a Mahanadi which means a great river. Near the source of this river in the Western Ghats, there is the jyotirlinga of Bhimshankar, one of the twelve jyotirlingas highly regarded by the Hindus. Many religious shrines such as Dhulkhed, Agarkhed and Pandharapur are located on the banks of this river (Gazetteer of India, Mysore State , Bijapur District 18-19). The Bhima originates in the Western Ghats near Bhimshankar. It flows south-east through Maharashtra and Karnataka and finally joins the river Krishna near Sangam village (Gazetteer of India, Mysore State, Gulbarga District 15). Before meeting the river Krishna it receives the waters of many rivers and small streams such as Amerja, Kagna, Bori, Bhutnal, etc. An important river to join Krishna is the Dhoni/Dhona/Dhone/Don which takes birth in the upland region of Sangli district, about four miles to the south of the town of Jath. South of Talikot, it passes through a rocky tract and meets the Krishna. The outer portions of the basin have a deep black soil cover which is very fertile and makes the Dhone basin a rich food producing area during years of good rain. The Dhone is well-known for Rabi crops, especially wheat and safflower. Dhone

valley was once known as the granary of Bijapur. Other important rivers to join the Krishna are the Malaprabha and the Ghataprabha. Malaprabha takes birth near a village called Kulakumbi. Bennihalla, a major tributary meanders to reach the Malaprabha, a little to the east of the Hole-Alur. It is historically important as pre-historic sites have been located along its banks between Hole-Alur and Khyad (Gazetteer of India, Mysore State, Bijapur District; 15, 20-21). Ghataprabha originates near the edge of the Sahyadris in a place called Ramaghat, about twenty-five miles west of Belgaum. It develops a beautiful gorge near Herkal and meets the Krishna near Chimalgi (Gazetteer of India, Mysore State, Bijapur District 21-22).

An important river which flows through Karnataka in the north-east is the Tungabhadra. Tungabhadra is part of Krishna basin as it ultimately joins the river Krishna. Tungabhadra is frequently mentioned in the Puranas. It is better known, especially in the Ramayana, by the name "Pampa". The river is mentioned in the *Tungabhadra Mahatmya* of the Brahmanda Purana which explains its origin. It is also referred to in the *Maheshvara khanda* of the Skanda Purana and according to the Matsya Purana it is one of the holy rivers taking birth in the Sahya mountain. The *Mahabharata* mentions the Tunga alongside Jahnavi (Ganga) and the Krishnaveni (Krishna) as a sacred river (Gazetteer of India, Mysore State, Raichur District 12). The Tungabhadra is formed when two rivers, Tunga and Bhadra meet each other. Tunga originates in the Western Ghats at Gangamula in the Varahaparvata in Chikmagalur district. It is met by the Begarhalla from Sringeri. Nearly seventy-five minor streams join the Tunga. Bhadra originates in Western Ghats at Gangamula in the Varaha-Parvata in Chickmagalur district. Tunga and Bhadra unite at Kudali. Tungabhadra is a perennial river and has several rivulets and streams which act as tributaries. Many *nalas* or streams such as Hirehalla, Alawandi, Sindhanur, Siddapur, Marli, Kapgol, Nandihal, Kanakgiri join

Tungabhadra. It also gets the waters of the Choradi or Kumudvati, the Varada and the Haridra. Flowing towards Andhra Pradesh, it meets the Hagari and joins the Krishna, a few miles beyond Kurnool at Kudalasangama. It is never dry and during rainy season, it swells and many rapids can be found in the river, the most important being at Mallapuram. The Hagari or the Vedavati is formed by the union of two streams - the Veda and the Avati which spring from the eastern side of the Bababudan hills. The Vedavati meets the Janagahalla or Chikka Hagari from Molkalmuru. It eventually flows into the Tungabhadra to the south of Hicha-halli in Bellary district. Janagahalla or Chikka Hagari is a major stream originating in Holalkere taluk. Two important hill streams which take birth in the range of hills in the north-west of the Molkalmuru taluk, flow into the Janagahalla. Many minor streams come in contact with the Janagahalla. It finally meets the Vedavati. Among the streams the Kushavati rises in the Agastya-Parvata and meets the Tunga. Certain small streams which join the Tungabhadra are no bigger than "nalas". Some of the minor streams include the Haggaranuru, the Hampasagara, the Gauriputra, etc. Streams such as Madihalla, Teligihalla, Ittigihalla, Urahalla, Hirehalla are utilized for irrigation work.

The Godavari is one of the major perennial rivers of Peninsular India and is famous as the Dakshina Ganga. It receives the waters of the Manjra, Penganga, Wardha, Pranhita, Indravati, etc. Manjra is a tributary of the Godavari and the Karanja is a tributary of the Manjra. Manjra takes birth in the Balaghat range of hills, in the Bhir district of Maharashtra state. Complete length of the river is 700 kms. Manjra river is of crucial importance for the dry region of Bidar. Karanja, a tributary of Manjra, originates in Kohir village of Zahirabad taluk of Sangareddy district of Andhra Pradesh. It comes in contact with Manjra near Nardasangam village in Bhalki taluk. Besides these rivers there are certain rivulets such as

Mullamari, Manik Nagar-nala, Chulki-nala, Madhura-nala, etc. There are also natural springs in the north such as Nanak-Jhira, Narasimha-Jhira and Papanash.

North Pennar is also famous as Uttara Pennar or Uttara Pinakini. (The name “Pinakini” is derived from the word “Pinaka”, the bow of Shiva and it is possible that the two rivers-North Pinakini and South Pinakini have got their name because of the curve resembling a bow formed by the two rivers, near the hill of Nandi, sacred to Shiva) (Gazetteer of India, Mysore State, Kolar District 14). It takes birth on the Chennakeshava-betta, north-west of Nandi hills. After crossing Cuddapah and Nellore districts of Andhra Pradesh, it falls into the Bay of Bengal near Nellore. Jayamangali is an affluent of the North Pinakini or North Pennar. It gets the Garudachala stream. It joins North Pinakini or North Pennar near Parigi in Anantapur district. Papaghni (in Sanskrit it means “destroyer of sin” - the name thus indicates a belief in the purifying efficacy of the waters of the river) is an important tributary of the North Pinakini river. It takes birth in the Gundalaguski hills in Chikballapur taluk, ten miles north-east of Nandi Hills. It meets the North Pinakini near Gaudalur in the Cuddapah district. The South Pinakini originates in the Chennakeshava hills, just north-west of Nandi hills in Chikballapur taluk of Kolar district. After crossing Bangalore it passes the Dharmapuri and South Arcot districts of Madras and falls into Bay of Bengal, a few miles north of Cuddalore. Vrishbhavati is a tributary of South Pinakini. It is born east of the Vokkaleri hills in Kolar district. Markandeya descending the Eastern Ghats towards the east of Ankushgiri meets the Vrishbhavati.

Palar means “milk river” and in the Puranas, it is referred to as “kshira-nadi”. It rises in a well near the summit of Nandi Hills or it is born in the neighbourhood of Kaivara to the west of Ambajidurga and Rehmanghar peaks. It leaves Karnataka and enters North Arcot district. After crossing North Arcot and Kanchipuram in

Chingleput district, it meets the Bay of Bengal, south of Chingleput. Nangli Hole is a tributary of Koundinya river, an affluent of the Palar.

Cauvery is a notable river of Karnataka. It has been mentioned in the ancient literature. Many legends are recorded in the Agneya and Skanda Puranas. Chapters eleven to fourteen of the Skanda or Kartikeya Purana, known as Cauvery Purana discuss the river from its inception upto its union with the sea and mention the many holy places and temples situated on its banks. It is famous as one of the holy rivers and a bath in it is believed to help wash off sins (Gazetteer of India, Mysore State, Mandya District 10-11, 13). The Cauvery takes birth on Brahmagiri at Tala-Cauvery in Coorg district in Western Ghats, where the Western Ghats form a sharp angle with the Bengunad range. Cauvery meets the Hemavathy and the Shimsha. It is joined by the Kabini at Tirumakadlu-Narasipur in Mysore district. The Kannike, a stream, joins the Cauvery at the foot of the hill close to the village of Bhagmandala. There are several small islands in the river such as Ranganathithu, Srirangapatna and Shivasamudram. The branches of the river form the highly serene falls of Gagana Chukki and Bara Chukki. Cauvery after crossing the Thanjavur district in Madras finally meets the Bay of Bengal. Among the major tributaries of the Cauvery is the Hemavathy. Hemavathy, which means a golden river, is also known in Kannada as Yenne-Hole, the oily or shining river. It originates at Javali, near Melbangadi in Mudigere taluk of the Chikmagalur district and flowing south, it meets the Somavathi near the head of the Bund-Ghat. It receives the Aigur river and the Katta-halla. It is joined by the Yagachi near Gorur. It eventually joins the Cauvery on the south-western side of the Krishnarajasagara waterspread. Among the important tributaries of the Hemavathy is the Yagachi. The Yagachi takes birth in the Bababudan hills in Chikmagalur district. Arkavati, a tributary of the Cauvery river, takes birth in a

well on the Nandi Hills and after coming down the Hills, enters the Doddaballapur taluk of Bangalore district. Lokapavani (means world-purifier) is a tributary of the Cauvery. It originates in Honakere hobli of Nagamangala taluk. Shimsha, is an affluent of the Cauvery. It is born in the south of Devarayanadurga in Tumkur taluk. It meets the Cauvery a few miles below Shivasmudram falls.

The area of South Kanara and Coorg is drained by rivers arising in the Western Ghats, such as the Netravati, Gurpur, Gangolli, Sitanadi, Swarnanadi, Kakkabe, Lakshmanatirtha, Harangi or Suvarnarathi and Barapole. Netravati originates in the Western Ghats to the east of Kudremukh. As it reaches Mangalore, the channel becomes somewhat wider and it is studded by several small islands called "kudrus". These are very fertile and known for rice and sugarcane cultivation. At Mangalore it unites with Gurpur river and both discharge their combined water into a backwater forming a common estuary to the two rivers, having a long spit of land intervening between it and the sea. Kumaradhari emerges near Subramanya hill. Among the many tributaries which join it, biggest is the Netravati which meets it near the village of Uppinangadi and thereafter gives its own name to the rest of the course and meets the sea near Mangalore. Lakshmanatirtha along with its tributaries the Ramatirtha and Karehole, drains nearly the entire south-eastern part of Virajpet taluk. It takes birth in the Munikadu forest on the plateau of Devasibetta in the Brahmagiris.

Among the most important of the rivers which flow to the west is the Barapole. It originates with the Lakshmanatirtha and Papanashini on the same plateau of the Brahmagiri hills. It joins with the Kalla-hole and the combined stream enters Malabar and empties near Chirakal into the sea. Another major stream which flows west is the Najikal which drains the Sampaje valley. The Sharavati takes birth at Ambuteertha. It receives the Haridravati on the right and the Yenne-hole

on the left. It goes down the Ghats near Jog and discharges into the sea at Honnavar in North Kanara.

Along with the above mentioned rivers, Karnataka also enjoys the benefit of various streams, natural reservoirs, springs, etc. Among the various minor rivers and streams are the Bindanahalli, Handihalla, Bhima, Shirur, Uppunda, Malukal, Mulki, Varahi, Dasanakatte-hole, Neriya-hole, Muttaremutta, Chikka-hole, Kakke-hole, Chora-hole, Mattapur, Hatti-hole. Natural reservoirs are useful, such as the ones in Coorg district which contain water all the year round. Similarly, springs are considered to be beneficial for agricultural operations.

Availability of water has benefitted the state of Karnataka. An assured supply of water has encouraged agricultural activity since ancient times and has enabled the state to grow a variety of crops which includes a wide range of cereals, vegetables and fruits. Further, a fairly sound water resource base has led to a thick forest cover which is home for the rich fauna.

2.3.2 Landscape of Karnataka - In Karnataka there is a basic division recognised in both traditional and official nomenclature - between the forested Malnad in the west and the more open country of the Maidan in the east: the transition is in places remarkably abrupt (Spate and Learmonth 1984). Karnataka plateau with its Malnad rim and Maidan character is drained by the Krishna and Cauvery river systems, rainfall variability resulting in varying patterns of land use and settlements. The vast Maidan, so named after its relatively low and subdued relief, is divided into north and south, largely because of the cultural differentiations, the former benefits from the Krishna and the latter from the Cauvery system. Malnad in Kannada means “hilly country” as *Male* stands for “hill” and *Nadu* for country.

The Malnad (Belgaum, Sirsi, Shimoga, Sringeri, Chikmagalur, Coorg, Gundlupet), is spread in a continuous belt trending NNW-SSE. Due to the deeply dissected Ghats edge in the west and various curves in the east, the width of this region ranges from 40 km to 85 km but its width shrinks near Sakleshpur where the headwaters of two rivers, the Netravati and the Hemavati have cut the Ghats. The topographical features of the Malnad also vary greatly from North to South. In the North, it attains a height of 450 m-600 m and south of this it descends and is only an upraised part above the general level of the plateau. The South attains a height of 900 m-1200 m in a large tract, particularly along the western rim just above the coastal plain. Some of the parts of this area achieve imposing height as the Bababudan hills (1,913 m). This part serves as watershed for the two different drainage systems and the rivers have, finely criss-crossed the area giving a picturesque hill-and-valley terrain (Singh 1971).

North Maidan (Bidar, Gulbarga, Raichur, Bellary, Dharwar, Bijapur) is a landscape of a large plateau covered with rich black cotton soil. The general elevation is about 600 m with broad flat bottomed valleys, ranging upto 450 m. The southern half of the area lies on Peninsular gneiss with NNW-SSE belts of Dharwar schists. To the north of Dharwar and Peninsular gneisses, sedimentary rocks such as sandstone, limestone and mudstone of Cuddapah formations are found in a continuous line in the west and Kurnool formations in the east. The remaining area is covered with Deccan trap. South Maidan (Chitradurga, Tumkur, Bangalore, Mysore), is a plateau marked by bare granitic boulders and hills. The region has moderate climate with variations in rainfall, the drier parts lie around Chitradurga, in the extreme east near Kolar and around Srirangapatam. The area is well endowed in minerals, particularly iron ore, manganese, gold, etc. (Singh 1971).

Karnataka enjoys the benefit of several mountain ranges. From the Nilgiri group which is located in the southern frontier are spread two ranges in a north-west and north-east direction, the Western and Eastern Ghat ranges respectively. The Western Ghats run close to the west coast almost without a break for about 1000 miles from the pass of Kundaibari in Khandesh to Cape Comorin with an average elevation of 4000 ft above the sea-level. The Eastern Ghats run as detached hills, more or less parallel to the eastern coast of India, with an average elevation of about 2000 ft (Law 1976). The chief peaks of the Western Ghats are higher than those of the Eastern Ghats. In the west, Mulainagiri and in the east Nandidroog are the highest peaks. Mountains are not only the birth place of a large number of rivers but also are a rich source of minerals and economically viable rock types. Like rivers, mountains have since time immemorial supported transport and communication by providing useful passes.

Geologically, this plateau of the Deccan is the oldest part of India (Desai 1970). Structurally the Karnataka region is very complex where rocks from the Archean to the Recent are found, the archean formations occupying about 75% of the total area (Singh 1971). The major rock types found in Karnataka are the Deccan-trap, Laterite, Dharwars, Peninsular Gneissic complex, Purana Formations or the Bhimas, Dykes, Kaladgi series, Crystalline schists, Granitic Gneisses, Granites, Charnockites, Pegmatites, etc. Deccan-traps are made of horizontal flows of basaltic lava. They normally form flat-topped hillocks and terrace like features. The physical features of individual flows show great variation. Some flows are hard and massive while others are weathered, soft and friable. This has resulted in a terraced landscape, suddenly ending in steep escarpment (Gazetteer of India, Mysore State, Bidar District 8). Cryptocrystalline silica in the form of agate, opal, chalcedony and jasperoid chert is commonly seen in association with Deccan-trap (Gazetteer of India, Mysore State, Gulbarga District 20). Kankar is easily

available. Laterite is highly porous, soft and can be cut into blocks and dressed in the form of bricks. It is this property which has given it the name "Laterite" (in Latin, "later" means a brick). The hard compact variety shades into comparatively soft yellow brown laterite. The cavities in the horizon are filled with clay material ranging in colour from buff to grey. The soft yellow brown laterite turns into variegated clays and lithomarge. The laterite due to its high porosity serves as reservoir rock. A high percentage of rain seeps underground and gets stored in the underlying clay horizons. Springs can be found at the base of the laterite scrap (Gazetteer of India, Mysore State, Bidar District 8-9). In laterite are found local pockets of limonite and haematite which have been utilized in the past as ores for smelting iron (Gazetteer of India, Mysore State, Gulbarga District 21). The concretionary laterite being hard and indurated is mostly used as road metal. The lithomargic variety is utilized for domestic mud roofing (Gazetteer of India, Mysore State, Kolar District 16). Some of the laterite show traces of manganese patches. Dharwar schists form the oldest recognisable members of the archean complex (Gazetteer of India, Mysore State, Kolar District 16). The rocks constituting the Dharwars comprise of metamorphic series - chlorite schists, banded ferruginous quartzites, hornblende schists, diabasic schists and amphibolites with their intrusives like quartz reefs and veins (Gazetteer of India, Mysore State, Raichur District 13). Some of the quartz reefs are gold bearing. Patches of asbestos, talc, serpentine, mica schists, garnetiferous kyanite can be seen.

Peninsular gneisses are of two types - grey and pink series. Purana Formations or the Bhimas are horizontal beds of sandstone, shale, limestone found in the valleys of the rivers Bhima and Kagna. The lower Bhima series consists of many basal conglomerates and grits and are succeeded by sandstones, green and purple shales. The middle Bhima series consists exclusively of limestone. The limestones of the

top most stage are overlain by purple shales. These shale form the upper Bhima series (Gazetteer of India, Mysore State , Gulbarga District 18-19). Dykes found are mostly doleritic in composition (Gazetteer of India, Mysore State, Raichur District 14). Felsite and Porphyry dykes are found in the state. Porphyry dykes show great diversity and vary in colour from dark grey, pink to chocolate. The schistose rocks comprise of crystalline schists, conglomerates, limestones, mangiferous clay schists and banded iron ore formations, chloritic schists, miaceous schists, ferruginous quartzite. Granite gneisses forms low hills and gently undulating mounds. They also form bold hills and stand out as huge bosses with high peaks and consist of a medium even grained granite grading into granite porphyries, the colour of these several types ranging from pink to grey (Gazetteer of India, Mysore State, Hassan District 12). The gneissic is much younger than the Dharwar system (Gazetteer of India, Mysore State, Shimoga District 11). Gneissic granites are good building stones. Coarse pink and grey granite are also used as building stones. Charnockites and Pegmatites too are available in Karnataka (Gazetteer of India, Mysore State, Coorg District 19).

2.4 Climate of Karnataka

Karnataka has favourable climate which has facilitated agriculture, extensive forest cover and rich fauna. Karnataka with its north-south elongation and arrangement of the major relief features responds differently to the monsoon currents and thus shows sub-regional climatic variations within the tropical monsoon zone. Western Ghats exert considerable influence as a climatic barrier or rather a division in the spatial distribution of climatic features such as the temperature, rainfall, relative humidity, etc. (Singh 1971).

North Maidan is marked by hot, dry climate with occasional droughts due to variable rainfall. Hot season is from March to May. May is the hottest month with the mean daily maximum temperature ranging between 40°C to 38°C and the

mean daily minimum temperature being approximately 25°C. There is a change in season with the start of south-west monsoon i.e. by beginning of June, there is a decline in temperature. The rainy season is followed by the cold season which is from November to February or March with December being the coldest month. Mean daily maximum temperature varies from 29°C to 27°C and the mean daily minimum temperature is 14°C to 17°C. North Maidan with its general lower altitude and rain shadow location, remains the driest (below 700 mm). In North Maidan rain is received both during south-west monsoon (June to September) and north-east monsoon (October and November). 70% to 80% of the rain is received during south-west monsoon with September being the rainiest month. The average amount of rainfall ranges between 907.55 mm and 600 mm. The variations in rainfall from year to year are large and the area of North Maidan is prone to drought. The region has dry climate, the period from November to May being the driest when the humidity is relatively low. There is an increase in humidity during the south-west monsoon period. Winds are stronger during south-west monsoon than in the remaining part of the year. In North Maidan, depressions and storms from Bay of Bengal, in post-monsoon season cross the coast, move west and cause heavy rains and occasionally strong winds. Thunderstorms can be seen in summer months of March, April, May and during the month of June when the monsoon begins. Thunderstorms also occur during post-monsoon months of September and October. Dust storms can be seen in April and May. Hailstorms are not so common (Gazetteer of India, Mysore State, Bidar District 15-17; Gulbarga District 28-30; Bijapur District 31-33; Raichur District 19-21; Bellary District 26-28).

South Maidan has relatively moderate climate. Hot season starts in March and continues till May. April is the hottest month with the mean daily maximum temperature varying from 40°C-41°C to 34°C. With the beginning of south-west

monsoon in June, there is a fall in temperature. The cold season which starts in November continues till February. December is the coldest month with the mean daily maximum temperature ranging between 29°C to 25°C and mean daily minimum temperature ranging between 15°C to 16°C. Like North Maidan, South Maidan also receives the south-west monsoon (June to September) and north-east monsoon (October and November) with some rain in April and May mostly as thundershowers. 70% to 50% of the rain is received during south-west monsoon with either September or October being the rainiest month. The average amount of rainfall varies from 600 to 700 mm. The variations in rainfall from year to year are large. The region has an equable climate, humidity being high during the south-west monsoon season. In the remaining year, the humidity is either low or moderate. Winds are strong in south-west monsoon but otherwise they are moderate. In South Maidan, storms originate in Bay of Bengal during post-monsoon months of October and November, cross the east coast and cause heavy rains and gusty winds. Thunderstorms are more frequent in April and May i.e. the summer months and in September and October i.e. the post-monsoon months. Dust raising winds can be experienced in April and May. Fog characterises the cold season (Gazetteer of India, Mysore State, Chitradurga District 22-24; Tumkur District 20-22).

Malnad is marked by cool climatic conditions and heavy showers. However, the humidity can be extremely high and sometimes the heat severe. The hot season is from March to May and April is the hottest month. The mean daily maximum temperature is from 35°C to 28°C and the mean daily minimum temperature is from 17°C to 22°C. The heat is somewhat reduced by the south-west monsoon which begins in June. Cold season starts after October and continues till February with December as the coldest month. The mean daily maximum temperature in the

cold season is between 29°C and 26°C while the mean daily minimum temperature varies from 14°C to 16°C. The Malnad because of the altitude is the rainiest (over 2000 mm.). South-west monsoon (June to September) and north-east monsoon (October and November) bring heavy rains with some rain in April and May as thundershowers. 50% to 80% of the rain is received during south-west monsoon and July is the rainiest month. The average amount of rainfall is from 3,930 mm to 700 mm. The variations in rainfall from year to year are not very marked. Humidity is high during the whole year, particularly during the course of south-west monsoon. It is somewhat less in the period from January to March when the climate is relatively dry. In Malnad winds are strong during the south-west monsoon period, while in the rest of the year, they are light to moderate. Cyclones, depressions and storms originate in Bay of Bengal and Arabian sea, cross the coast and result in heavy rains and strong winds. Thunderstorms are a feature of April and May as well as of October and November. Fog is seen sometimes in the cold season (Gazetteer of India, Mysore State, Coorg District 30-32; Shimoga District 24-26).

The region of Karnataka lies in the tropics and due to its location and configuration, receives plenty of rainfall over a large area leading to dense growth of vegetation. Forests are of considerable value because of their products (teak, sal, eucalyptus, sandalwood), influence on climate and prevention of soil erosion. Malnad, especially the area of North Kanara, Mysore, Shimoga and Coorg, is extremely rich in forest wealth. On the other hand the forest cover in Maidan is relatively moderate.

2.5 Forest Cover

North Maidan is characterised by hot and dry climatic conditions with occasional droughts because of variable rainfall. As the rainfall is inadequate and not very regular and the climate dry, the forest cover is thin and sparse. The type of forests found in North Maidan are mixed dry deciduous type, scrub type and dry tropical thorn forest. South Maidan has dry climate and inadequate rainfall, with the result that vegetation is not very dense. The main forest types include the dry deciduous type and thorny scrub type. The region of Malnad is marked by cool climatic conditions and heavy rains. It has high humidity and occasionally the heat can be intense. The forest cover is extremely thick and the type of forests found here include evergreen forests, dry deciduous forests, wet deciduous forests, semi-evergreen forests and scrub forest.

2.6 Soils

Karnataka along with these resources has very sound agricultural base due to the availability of fertile soils, adequate water for irrigation and favourable climatic conditions. The Maidan consists in general of rolling plateau rising in the east (between Tumkur and Kolar) into disjointed granitic hills of irregular plan and elevation (Spate and Learmonth 1984). The level plains with fertile soils are extremely suitable for agriculture, with the result that agriculture is an important occupation.

The type of soils found in North Maidan comprise of shallow to deep reddish brown clayey soil, black clayey soil, deep black soil, laterite soil, shallow to medium black soil, red sandy loams, alluvial soil, red soil, black cotton soil and red sandy soil. Deep black soils are clay to clay loam in texture, low in carbon, phosphorus, potassium and low in water holding capacity. They are alkaline and poorly drained. Laterite soils are bright red to pale red and sandy to sandy loam in

texture. They have poor water holding capacity and are not very fertile. They have low phosphorus and potash content. Shallow to medium black soils are grey to deep black in colour, clay to clay loam in texture and have lime nodules. They have high base content and water holding capacity. Red sandy soils are red to pale brown in colour, are well leached and in texture they are sandy to sandy loam. Alluvial soils are rich in bases and clay to clay loam in their texture. Black cotton soils have high percentage of calcium, magnesium, soda and water soluble salts. They are highly calcareous and heavy in texture. Red soils are poor in plant nutrients, are generally calcareous and not free from lime. They are light in texture and have a clayey quality (Gazetteer of India, Mysore State, Bidar District 146-147; Gulbarga District 91-93; Bijapur District 141; Raichur District 140-142; Bellary District 143-144). In South Maidan the soils which predominate include black soil, red soil, sandy soil, clay loam soil, laterite soil, red loamy soil and black loamy soil. Black soil is rich, fertile, has high water holding capacity and a notable concentration of soluble salts. It is alkaline with potash content being medium to high and phosphorus content low to medium. Red soil has good drainage (Gazetteer of India, Mysore State, Chitradurga District 122-123; Tumkur District 115-116).

In Malnad the soils found are red sandy loams, red clay loams, forest loam, red laterite, clayey soil, alluvial soil, red sandy soil, black soil, alkaline soil, red loamy soil, black cotton soil, sandy soil, loamy soil, sandy loam, sandy red, medium black, lateritic soil, dry clayey soil, light brown soil and dark brown clayey soil. Red sandy soils are shallow to medium, intermixed with quartz pebbles and iron concretionary material. They are gravelly to sandy loam in texture, highly leached and poor in bases. Their water holding capacity is low. Red clay loams are shallow to medium, reddish to pale brown in colour, clayey to clay loam in texture

and well-drained with gravelly sub-soil. Lime concretions are sometimes present. Black soil is black to pale grey in colour and has lime nodules. It is rich in bases and has high water holding capacity. Red loamy soil is acidic and neutral, nitrogen level being normal in dry lands and deficient in wet lands. The potash content is normal while the phosphorus is highly deficient in both wet and dry lands. Lateritic soil is acidic in nature and it is deficient in calcium and other plant nutrients. It has satisfactory content of nitrogen and potash while in phosphorus, it is deficient. Due to heavy leaching the soil is shallow. Light brown soil is loamy to clay loamy in texture (Gazetteer of India, Mysore State, Coorg District 133-134; Shimoga District 124-126).

2.7 Human Settlements

Excavations and explorations have established that neolithic culture existed nearly all over Karnataka. However, the region of North Maidan has emerged as probably richest in the cultural remains of the neolithic period. The number of sites in South Maidan might be small as compared to North Maidan but certain parts such as Kolar and Mysore are rich in the evidence for neolithic period. In Malnad the number of neolithic settlements is comparatively limited. In North Maidan there seems to be a concentration of neolithic sites on the banks of river Krishna and its tributaries, notably the Bhima, the Tungabhadra and the Malaprabha. The important excavated neolithic settlements that are located on river banks are Maski (on Maski nullah, a tributary of Tungabhadra), Hallur (on Tungabhadra), Kodekal (near river Krishna), Kupgal (on Hagari, a tributary of Tungabhadra) as well as a large number of explored sites. Access to the rivers must have fulfilled not only the basic needs related to subsistence but would have facilitated traffic as

well. Along with fertile plains drained by rivers neolithic man occupied granitoid hills. Notable settlements such as Tekkalakota, Piklihal, Budihal and Sanganakallu are located on terraces at different levels of the hillocks or at the foot of hills. In South Maidan certain parts such as Kolar and upper Kaveri valley have given substantial evidence for the neolithic culture. The major excavated settlements of this region were generally located on or very close to the rivers, as for instance Hemmige on the right bank of Kaveri, T. Narasipur on the left bank of Kaveri (at the confluence of Kaveri and Kapini), Muttalavadi on the left bank of Kaveri, Banahalli in the upper reaches of the Palar and Brahmagiri close to Chinnahagari. Some of the explored sites were also situated on river banks like Shivakalli on the right bank of the river Suvarnavati, Hosahalli on the left bank of the river Suvarnavati, Booditittu on both sides of a small stream known as Gundla which joins the river Suvarnavati and Yechagalli on the left bank of the river Kapini (Krishnamurty 1971, 6-7). However, the discovery of rock shelters at Chandravalli and West hill of French Rocks suggest that neolithic man also occupied hills.

One of the features common to the settlements on the river banks and on the hills is the abundant and varied types of pottery. The large number of sites and extensive pottery tend to suggest that neolithic settlements were perhaps thickly populated. A crucial factor that was probably responsible for supporting the large population was the resource base that human habitations could effectively use as per their needs. The evidence of several animal bones indicates that both pastoralism and hunting were an important economic activity. The thorn and scrub forest was interspersed by large areas of grassland. The hilly tracts covered by Archean granite-

gneiss formations were not suitable for agricultural purposes but promoted extensive pasture. Also, there are several indications that small scale horticulture was practised. The fertile plains drained by rivers were ideal for agricultural activity. Further, the evidence for the use of gold at T. Narasipur suggests that neolithic man exploited the locally available minerals. Gold is found in Mysore and Kolar gold mines.

The settlement pattern and the resource exploitation clearly indicate that man had acquired an understanding of the local environmental conditions. The habitat was generally established wherever one could effectively utilize the available resources and thus derive maximum advantage. Further, the exchange network that seems to have existed ensured that the basic necessities were met with and this gave support to the settlements. A notable feature of neolithic-chalcolithic period in Karnataka was the concentration of sites in certain select areas. This kind of regional focus of culture was to an extent influenced by ecological and economic factors. This lack of any discernible uniformity in the distribution of neolithic-chalcolithic culture appears to have given birth to distinctive patterns which found echo in the proto-historic period.

North Maidan has several megalithic settlements thereby showing that man continued to favour this region since neolithic-chalcolithic period which is richly represented here. However, it is South Maidan which has perhaps the most prolific evidence of megalithic culture. Malnad had smaller number of settlements as compared to North and South Maidan. A feature common to North and South Maidan as well as Malnad was the increase in the number of megalithic sites over

the neolithic-chalcolithic sites. In North Maidan megalithic settlements were located on river banks as well as on terraces and foot hills. A large number of megalithic sites were found on the banks of the tributaries of river Krishna, prominent among which are Tungabhadra, Maski nullah, Malaprabha and its tributaries Bennihalla and Jaulhalla. Hallur is on Tungabhadra while Maski is on Maski nullah. Along with certain excavated sites like Piklihal, Sanganakallu a large number of explored sites were situated on the terraces and at the foot of sandstone and granite hills. Similarly, megalithic culture flourished in South Maidan and certain areas such as Kolar and Mysore are particularly rich in the vestiges of megalithic period. Many of the important excavated settlements of the period were located on river banks, such as Brahmagiri and Chandravalli close to Chinnahagari, T. Narasipur on the left bank of the river Kaveri, Muttalavadi on the left bank of river Kaveri, Budhitittu on the southern bank of the river Swarnamukhi and Banahalli in the upper reaches of the Palar river. However, many of the megalithic sites were also located at foothills.

It appears that man showed discretion in the use of land. Burial sites were normally located on unarable lands whereas the habitation sites were mostly found in open fields (Nagaraju and Rao 1979, 326). The identification of several sites with burial vaults is indicative of big population. Some of the burial vaults at times had remains of more than one person. There is a possibility that the building of these burials would have demanded an easy and abundant labour supply. The stones used in the construction of graves were both big and heavy and would have required extensive labour for working, transporting and hoisting them. An important factor that seems to have supported the large population was the availability of resources. Though climatic conditions are hot, dry and the rainfall is not sufficient, yet agriculture remains an important activity in North Maidan mainly because of the easy availability of water for irrigation and fertile soils.

Agriculture of the period was further promoted by the use of a wide range of iron tools and implements, particularly knives and axes. As the iron tools were more durable and effective as compared to stone, it became possible to work the soil faster and deeper. Stone tools such as axes, pestles were probably used in agricultural activities. The growing importance of agriculture is reinforced by the recovery of grains like rice and millet from Hallur. Rice husk was discovered at Jadigenahalli and Doda Kadattur.

Agriculture was supplemented by hunting and domestication of animals. Iron implements such as spearheads, arrowheads and stone sling balls perhaps served as the equipment for hunting. That hunting was practised during the period is indicated by large number of hunting scenes painted in the rock shelters at sites like Hire-Benkal. These paintings seem to hint at community hunting carried on the horse back. Pea-hens, Peacocks, Stags, Antelopes were hunted for food and tigers were killed to prevent their attacks on cattle and community (Sundara 1975). Animals such as Cattle, Sheep, Goat were domesticated for their milk and meat. The evidence of fowl from Hallur shows that people were aware of fowling. The manure provided by these animals must have made the land more fertile. Certain animals such as Horse, as known from Hallur and from rock paintings found in district Raichur, and bulls may have served as farm animals. Thus, it emerges from the above discussion that agriculture in all probability constituted the base of the economy and was further supplemented by hunting and domestication of animals. The recovery of iron tools, implements and weapons from various sites such as Maski, Hallur, Halingali and Piklihal is indicative of the fact that man had acquired knowledge necessary for the prospecting and exploitation of iron ore. Districts Bijapur, Raichur and Bellary in North Maidan have rich iron ore deposits.

2.8 Conclusion

The above mentioned facts establish beyond doubt that Karnataka is fairly rich in resources of various types. Water resources such as tanks, wells, ponds, irrigation channels, streams, rivers promote thick vegetation which in turn provides safe sanctuary to the fauna. Abundant water supply makes it easy for the farmer to irrigate his land. Karnataka has large number of mountains which are the home of several rivers, valuable minerals and economically useful rock types. Infact, these minerals and rock types since ancient times, have been put to various uses. The first evidence for the use of iron in the country comes from Hallur in Karnataka. Further, the easy availability of building stone has encouraged the construction of some of the most magnificent temples since ancient times. Dharwar schists were used for ornamental structures in the temples of Halebid and Belur (Singh 1971). Some of the mountains have beautiful water falls (Gagana Chukki and Bara Chukki in Biligirirangan range) while others have famous religious centers (the summit of Indragiri has the statue of Gomateshwara and is a reputed religious center). The availability of natural sources and a supportive landscape made the region of North Karnataka suitable for human habitation. The presence of fertile soils and rivers promoted agriculture whereas the minerals and rocks encouraged industry and craft. Karnataka is well endowed with natural resources of various types but the distribution of these natural resources is not uniform, with some areas being rich in forest and faunal wealth (Malnad) while others being more suitable for agriculture (Maidan). The abundance and the unbalanced distribution of these resources have influenced the course of historical development and this would become evident in the following chapters.

CHAPTER THREE

3. EARLY HISTORIC DYNASTIES

3.1 Introduction

The ruling dynasties and the other elite such as ministers, officials, clergy and specialized craftsmen were important sections of the society who may have contributed significantly towards the process of urbanization in Karnataka. The Mahabharata has references to Karnataka thereby indicating that Karnataka was a territorial unit from a very early period (Desai 1970). The Sabha Parva and the Bhishma Parva of the Mahabharata mention Karnataka. The Ramayana discusses the Kaveri and the janapadas like Ristika and Mahishaka hinting at the region of the Rashtrakutas and Mysore respectively (Murthy and Ramakrishnan 1977). The history of Karnataka becomes relatively clear from third century BC, from when a better picture of the political horizon emerges on the basis of inscriptions and coins. Early historic period in Karnataka witnessed the rule of various political dynasties and this is made evident by the varied archaeological assemblage. Some of the ruling houses such as Nandas, Mauryas and Satavahanas had their centers of power clearly outside Karnataka. The region of Deccan was extremely lucrative as it was rich in resources. According to the Arthashastra of Kautilya, the southern trade route leading to areas producing an abundance of conch shells, diamonds, rubies, pearls and gold was profitable. There is a possibility that the Mauryas and later the Satavahanas ventured into Karnataka looking for resources. These dynasties introduced new cultural traits which were adopted by the local communities in their day-to-day life. The outside powers seem to have played a crucial role in facilitating the transition from proto-historic to the early historic. This transition may have been the outcome of active interaction between metropolitan states and the region of Karnataka.

3.2 An Account of Political History

3.2.1 Nandas - An inscription of the early thirteenth century CE shows that first the Nandas and then the Mauryas ruled over Kuntala which comprised western Deccan and northern Mysore. Another inscription of the eleventh century CE indirectly hints at the prevalence of the Nanda era in South India which could have been possible only if Nanda rule had been established over the Deccan. The existence of the Nanda era is supported by the Hathigumpha inscription of Kharavela. The Nanda's did conquer Kalinga and therefore the subjugation of the territories lying farther south seems to be a possibility. The existence on the Godavari of a city called *Nau Nanda Dehra* (Nander) also suggests that the Nanda empire included a large part of the Deccan. From a commercial point of view also the south began to grow in importance at this time. Kautilya wished to maintain links with Dakshinapatha "for the sake of its diamond and gold mines, pearl and chank fisheries and numerous opulent marts".

3.2.2 Mauryas – The Nanda dynasty was overthrown by Chandragupta Maurya in about 322 BC. The Junagadh Rock inscription of Rudradaman, which records the construction of the famous Sudarsana lake by an officer of Chandragupta, shows that the first Mauryan emperor had extended his empire as far as Surashtra (Kathiawar). Jaina references in literature and inscriptions linking his name with Sravana Belgola in Mysore may be accepted as an indication of his presence in this part of the peninsula as well. Some parts of the Deccan may have been conquered by Bindusara (297-272 BC).

Fourteen Asokan inscriptions have been found at Brahmagiri, Jatinga Ramesvara, Siddapura, Koppal, Maski, Nittur, Udegolam and Sannati (Murthy 1987-88).

These inscriptions tend to suggest that a part of Karnataka was included in the Mauryan empire constituting its southern boundary. The Maski edict is significant as it revealed for the first time the name of Asoka. In the Brahmagiri edict orders from the prince and provincial officers at Suvarnagiri are communicated to the officers of Isila, which seems to be Brahmagiri itself (Desai 1970). In the South Suvarnagiri was an important province of the Mauryan empire. It was the responsibility of the prince (aryaputra). In the opinion of Hultsch, Survarnagiri must have been the same as Kanakagiri between Hampi and Maski. However, other scholars maintain that since Asoka's Rock Edicts I to XIII were brought to light at Yerragudi, Yerragudi must have been an important town and therefore Jonnagiri near Yerragudi must be the same as Suvarnagiri. The presence of Mauryas in Karnataka is supported by punch-marked coins. It seems that these coins travelled from north to Karnataka for so far there is no evidence for the manufacture of punch-marked coins in Karnataka. Eleven silver punch-marked coins were recovered from Dharwar. They belonged to Mauryan and post-Mauryan series. A silver punch-marked coin was recovered in the excavations at Chandravalli. A punch-marked coin has been collected from pre-Satavahana levels at Banavasi. The coin which is of debased silver alloy has been attributed to the late Mauryan period. At Vadgaon-Madhavapur punch-marked coins were discovered in a room of the structure which has been dated to first century CE by the excavators. The excavation brought to light a total of eight punch-marked coins made of thin sheets of base silver and copper (Murthy 1975). At Chikka Sindogi (District Raichur) five thousand five hundred and thirty four silver punch-marked coins kept in a globular copper vessel and in an earthen pot were discovered. The copper pot bears an inscription in Brahmi characters which reads *chamtasa* meaning belonging to Chanta. This inscription has been dated to second century CE on palaeographical grounds (Murthy 1996). It is quite evident that

these coins belong to the imperial Mauryan typology. Two more hoards of punch-marked coins have been recorded in Districts Gulbarga and Raichur. The former hoard contained two hundred and twenty five coins whereas the latter hoard had sixty three coins (Murthy 1996). Punch-marked coins which are regarded as the earliest coins of Karnataka thus contribute significantly to the understanding of the political history.

According to Taranath, the kings of sixteen towns were destroyed by Bindusara and “he made himself master of all the territory between the eastern and western seas”. Tamil literature has vague allusions to Mauryan invasions of South India which may have taken place in the reign of Bindusara. Under Asoka a large part of the Deccan was ruled by the viceregal princes of Suvarnagiri and Tosali, the Mahamatras of Isila and Samapa and the officers in charge of the Atavi or forest country. The southern limit of Asoka’s empire did not extend much beyond the locality of the southernmost group of his inscriptions discovered at Siddapura, Jatinga-Rameswara and Brahmagiri in the Chitaldrug district of Mysore. Beyond this to the south were found the independent states of the Cholas, Pandyas, Keralaputras and Satiyaputras (Yazdani 1982).

3.2.3 Maharathis - With the collapse of the Mauryan power many subordinate and feudatory families who had served the Mauryas faithfully declared independence and established themselves in various territories. The local governors called Maharathis became powerful in different parts of the Deccan. A family of Maharathis ruled in Chitradurga - Karwar - Banavasi area. The known members of this family had the appellation Sadakana as part of their name and therefore are also known as the family of Sadakana. The Maharathis began the practice of minting coins in lead. Maharathi coins were collected from Chandravalli. A large number of lead coins of the Maharathis have been recovered

from Chitradurga, Karwar, Aihole and Banavasi. On the basis of their coinage, four generations of Maharathis have been identified. They are Sadakana Kalalaya Maharathi, Sadakana Kanha Maharathi puta, Sadakana Chutukanha Maharathi, and an anonymous Maharathi. The suffix and the prefix of these names makes it evident that all of them belonged to the same family and the similarity of their coins further confirms this fact. It is generally accepted that the Maharathis were followed by the Ananda kings in the Chitradurga-Banavasi area. Anandas were succeeded by the Satavahanas. Since the Ananda rulers are described as kings in their coins, it seems that they were not subordinate rulers but independent kings. It is a possibility that Gautamiputra Satakarni conquered this part of Karnataka from the independent Ananda kings. This is confirmed by the facts as known from the Nasik inscription. It would make the Ananda kings, the contemporary of Gautamiputra Satakarni and they could be placed in the period of the early half of the first century A.D. As four generations of Maharathis existed before these Ananda kings, Kalalaya Maharathi may be ascribed to the second quarter of the second century BC (Murthy 1975).

3.2.4 Anandas - Maharathis were succeeded by the Anandas who are also famous as Chutus. It is now held that as the names of the three known rulers end in the suffix Ananda they should be regarded as belonging to the Ananda family. Three kings Chutukulananda, Mudananda and Sivalananda, of this family are known so far from their coins as no inscriptions which can be attributed to them have been found (Murthy 1996). The coins of these rulers were recovered from the Karwar hoard, at Chitradurga and Chandravalli. A large number of there coins have been discovered in the Banavasi area also. The coins of these rulers are made of lead (Murthy 1975). The coins of Sivalananda were recovered from Banavasi. Hence, it emerges that they ruled over an area comprising Chitradurga, Banavasi and

Karwar. There is no certainty about the succession of these rulers though there has been a general assumption that Chutukulananda was earlier than Mudananda who was followed by Sivalananda (Murthy 1996). The Banavasi coins have been dated to about second-third century CE on grounds of palaeography and other details (Bhat 1978, 115).

3.2.5 Satavahanas - After Mauryas, the first imperial power to dominate the political history of the Deccan including Karnataka was the Satavahanas. Inscriptions and coins establish clearly the presence of Satavahanas in Karnataka. Excavations at Chandravalli, Brahmagiri, Maski, Vadgaon-Madhavapur, Banavasi and Pattadakallu and many other places in Karnataka have resulted in the discovery of rich material assemblage belonging to the Satavahanas. Satavahana inscriptions have been recorded at Sannati, Malavalli and Vasana. The mention of Satavahanihara in the Myakadoni inscription of Pulumavi and Satahanirattha in the Hirehadagali plates of Pallava Sivaskandavarma further lends credence to the presence of Satavahanas in Karnataka (Desai 1970). Banavasi, Sannati, Vadgaon-Madhavapur, Kurugodu and Balligave are some of the sites which have given evidence for Satavahana culture largely in the form of pottery and coins. So far the coins of Gautamiputra Satakarni, Vasishthiputra Pulumavi and Yajnasri Satakarni have been recovered. The coins of the other rulers of the Satavahana dynasty have not been collected yet. Portrait coins of the Satavahanas which have been collected elsewhere have not been reported from Karnataka (Murthy 1996). Coins of Gautamiputra Satakarni have been found in excavations at Banavasi. These are small lead coins. Coins of Vasishthiputra Pulumavi have been reported from Chandravalli and Chitradurga. Yajnasri's coins have been noted at Chandravalli and Banavasi. The Hippargi hoard from District Bijapur comprised eighteen potin coins of Sri Satakarni, Yajnasri and Pulumavi (Murthy 1996).

The origin and the original home of the Satavahanas has been a debatable issue for scholars. In the inscriptions they are known as the Satavahanas and Satakarnis whereas in the Puranas they are referred to as the *Andhras*, *Andhrabrithyah* and *Andhrajatiyah*. The Puranic evidence has created difficulties in the identification of the Satavahanas. On the basis of the Puranic evidence some historians have identified the Satavahana-Satakarnis with the Andhras. They locate the original home of the Satavahanas in the Andhra country consisting of the Godavari, Krishna and Guntur districts. R.G. Bhandarkar placed the capital in Dhanyakataka whereas V.A. Smith and J. Burgess located it in Srikakulam. According to L. Barnett, the Satavahanas had three capitals, the earliest capital was Srikakulam, followed by Dhanyakataka and finally Partisthana or Paithana. Scholars such as V.S. Suktankar, K.P. Jayaswal, H.C. Roychoudhury and others have questioned the Satavahana-Andhra identity. According to Suktankar nowhere in the records are the Satavahanas called Andhras. In the contemporary or nearly contemporary records as the Hathi-Gumpha, Girnar and the Talgunda inscriptions, they are mentioned as Satavahanas and never as Andhras. A large number of their inscriptions and coins were collected in western India. They did conquer the Andhra country but as excavations and explorations have shown, their earliest territories lay in western India. According to Suktankar *Andhrabhritya* means 'servants of the Andhra' and therefore the name could apply to western vassals of the Andhra or the South-east and not to the Andhra in the strict sense. K. Gopalachari maintains that the early Satavahana power lay in the western Deccan.

The inscriptions of the Satavahanas are known from the Andhradesa country only from the reign of Vasishthiputra Pulumavi. In the opinion of Gopalachari, it is a possibility that the Satavahanas who were members of the royal family in Andhradesa accepted service in the western Deccan under the Mauryas and

consequently got the title of Andhrabhritya. The original home of the Satavahanas must have been “Satahanirattha” mentioned in the Mayakadoni and Hirahadagalli inscriptions and included the present Bellary and Dharwar districts. It is a possibility that they were not of Andhra origin and only after Gautamiputra Satakarni, they conquered the Andhra country and had become famous as the Andhras (Murthy and Ramakrishnana 1977). Satavahanas have been wrongly called Andhras in the Puranas because by the time the Puranic lists were organized they had lost their territories in the north and the west and their rule was reduced mainly to the Andhra country. The Satavahana kings are described as lords of Dakshinapatha. According to some scholars Dakshinapath comprised the whole of trans-Vindhyan peninsular India while in the opinion of others it consisted of the present territories of Andhra Pradesh, Maharashtra and Karnataka. It is perhaps in this limited sense that the Satavahanas became the lords of Dakshinapatha (Desai 1970). The chronology of the Satavahanas has not been very clear primarily because of the confusion created by the Puranas. These discrepancies have been created because when the Puranas were compiled the Satavahana rule had come to an end and in the absence of correct information their authors relied on vague traditions and hearsay reports. However, inscriptions and coins of the Satavahanas and their subordinate chiefs have helped in filling the gaps (P.B.Desai 1970). According to Vayu Purana nineteen princes ruled for a period of three hundred years whereas the Matsya Purana mentions thirty kings ruling for about four hundred and fifty years. It is generally held that the Satavahanas ruled till about the close of second century CE and were in power for approximately four hundred and fifty years and not three hundred years (Murthy and Ramakrishnan 1977).

Simuka is generally considered to be the founder of the Satavahana line of kings. There is limited information about him as neither his coins nor his inscriptions are

available. He is referred to as a Raja by the Puranas and he is known as *Raya Simuka* in the Nanaghat inscription. It seems that he had not established an independent state. The Andhras with their thirty walled towns were already powerful contenders, though they may have belonged to different family groups. It is a possibility that Simuka brought these several Andhra groups together and somehow made them accept him as their leader. He comes across as a well known figure by about 271 BC. Simuka was in power for twenty-three years. If the first Satavahana king mentioned in the later Jain legend was actually Simuka, then he must have been a follower of Jainism in the early years of his reign. He is said to have built Jain temples and chaityas (Yazdani 1982). He established matrimonial relations with the Pallavas and the Chutus of Kuntala and thus succeeded in achieving political consolidation in South India (Murthy and Ramakrishnan 1977).

Kanha, the brother and successor of Simuka, continued to respect the Mauryan sovereignty. The Nasik inscription of his time records the construction of a cave by a Mahamatra in charge of the Sramanas at Nasik. The cave is Asokan in inspiration and Satavahana in execution. It is among the earliest of the series of Satavahana caves at Nasik. Kanha was a contemporary of Asoka and was influenced by Dhamma. Asoka's death must have given him an opportunity to free himself from Mauryan authority and be an independent ruler of the regions under his control. Kanha was succeeded in 230 BC by his son Satakarni (I), who is also known as Mallakarni in Matsya Purana. He ruled for ten years. After him Purnotsanga and Skandastambhi each had a rule of eighteen years. The rule of these three chieftains did not witness any major development. The disturbed conditions across their borders perhaps kept these kings preoccupied in the task of safeguarding their power. The next important ruler was Satakarni II who came to power in 184 BC. Satakarni II embarked on a career of conquest and paid a lot of

attention to the northern and western frontiers of his kingdom. Satakarni's western territories were safe because of his alliance with the powerful A'giya family. In the Nanaghat inscription, Naganika the queen of Satakarni described herself as a girl (bala) of that Maharathi who was the *A'giyakulavardhana*. An examination of his coins shows that he brought west Malwa under his control. He further extended the territory under his control by conquering Kalinga and east Malwa. His success in east Malwa is supported by his coins and an inscription on the Sanchi gateway. The reign of Satakarni II was successful from beginning to end. He is famous for the performance of many Vedic sacrifices. The Nanaghat inscription of Queen Naganika refers to the celebration of *Asvamedha*, *Rajasuya* and *Agnyadheya*.

The Nanaghat record and the relievo inscriptions tend to suggest that Naganika was the mother of Vedisiri and Satisiri. In the opinion of Dr. Buhler and Prof. Rapson there is no evidence to show that any of her sons ever occupied the Satavahana throne. Of the eight successors of Satakarni II before Pulumavi I, the Vayu Purana mentions only one, Apilaka by name. He was in power for twelve years. A copper coin belonging to Apilaka has been collected from Central Provinces. From the end of Apilaka's reign to the accession of Pulumavi I in 43 BC, there were a total of six Satavahana rulers. During the rule of these six kings whose names are not given in the Vayu Purana, the Satavahana empire seems to have remained intact.

Pulumavi I managed to bring the area of Magadha as well as Avanti and Akara under his control. After this the Satavahanas were the only Indian power with whom the Saka overlords of the north had to compete. The death of Pulumavi I made it easy for the Western Kshatrapas to recover the territories which they had earlier lost to the Satavahanas. Nahapana, the Western Kshatrapa took over the

Satavahana provinces of northern Maharashtra and Aparanta. Gaurakrishna, ascended the throne in 19 BC and was in power till 6 CE and witnessed the disintegration of the Satavahana empire. Gaurakrishna was succeeded by Hala who ruled for only one year. He is considered to be a fine poet. He collected and edited a number of erotic verses, *gathas*, of high elegance. According to *Lilavati* he led an expedition to the eastern part of his empire, Saptagodavari, which has been identified with modern Daksharama in the Godavari District.

A succession of weak rulers ascended the Satavahana throne from 7 CE to 62 CE. During this period Satavahanas had to increasingly struggle with Khakharatas over their western possessions. The Satavahana ports of Sopara and Kalyan were closed to all commerce and all trade was channeled to the western Kshatrapa port of Barygaza (Broach). The economic life of the kingdom was adversely affected and it was in these bleak circumstances that Gautamiputra Satakarni came to power in 62 CE. Gautamiputra Satakarni won back the territories on his western borders from the Khakharata successors of Nahapana. Both his Nasik and Karle grants were issued from the *Vijayaskandavara* of Govardhana. He thus succeeded in both expanding and consolidating the Satavahana empire. According to the details given by his mother Gotami Balasri his dominions comprised of Asika, Asaka, Mulaka, Surashtra, Kukura, Aparanta, Anupa, Vidarbha, Akara, Avanti, Vindhya, Achavata, Pariyatra, Sahya, Kanhagiri, Siritana, Malaya, Mahendra, Seta, Chakora and stretched as far as the seas on either side.

Gautamiputra Satakarni was succeeded by his son Vasisthiputra Pulumavi II in 86 CE. Eight inscriptions belonging to him have been reported from Nasik (four), Karle (two), Amaravati (one) and Dharanikota (one). Many coins have been found in Andhradesa which are attributed to him. He is described as *Dakshinapathesvara* in Gotami-Balasri's inscription dated 105 CE. During his reign two important

provinces of Avanti and Akara slipped out of Satavahana control. Pulumavi's inscriptions at Amaravati and Dharanikota and the large number of his coins in the Andhra regions testify to his growing interest in the eastern provinces of his empire. Ptolemy's mention of Baleokuros at Hippokura as being contemporary with Pulumavi at Paithan further supports Pulumavi's increasing preoccupation with the eastern part of his empire. Pulumavi II was succeeded in 114 CE by Siva Sri. Siva Sri and his successor Sivaskanda each ruled for seven years. During their reign the house of Chashtana in north grew steadily more powerful.

Gautamiputra Yajna Sri came to power in 128 CE and decided to fortify his frontiers. However, twice he suffered reverses at the hands of Sakas (about 135 CE and 144 CE). As a result of these reverses the whole of the Aparanta country and all the northern and north-western provinces accepted the Saka overlordship and Rudradaman's son-in-law Vasishthiputra Satakarni was declared the king of the erstwhile western Andhra empire. He was in power till 157 CE. His empire was limited entirely to the eastern Deccan. His inscriptions and coins are found across a large area. One of the important inscriptions is at Chinna, close to sea shore, only three miles from Motupalle which later on became a well-known trading post. The large number of ship coins belonging to him are indicative of an extensive maritime commerce during his reign. He was the last noteworthy ruler of the Andhra- Satavahana dynasty. The reigns of his successors Vijaya, Chanda Sri and Pulumavi III covering a period of seventeen years are of little significance historically. Pulumavi III seems to have placed the region of the Satavahani-hara (the Bellary district) under Mahasenapati Khaeanaga. The rise of the Chutus in the western and southern districts, of the Abhiras in the Nasik area, of the Ikshvakus in the east and the growing power of the Sakas of Ujjain gave a major blow to the Satavahana empire leading to its ultimate collapse (Yazdani 1982).

Scholars maintain that if not the rulers of the main line, some members of the collateral branch of the Satavahana house were closely associated with Karnataka. The Puranas refer to a king Kuntala Satakarni and this name is found in Vatsyayana's Kamasutra. Rajasekhara the author of Kavyamimamsa names a king of Kuntala as a Satavahana. The Satavahana king Hala, the author of Ghathasaptasati is said to have been the king of Kuntala (Desai 1970). Prof. Kane describes Kunatala as the country from the Bhima and the Krishna to some distance beyond the Tungabhadra which also included Kolhapur and other Southern Maratha States such as Miraj, Belgaum and the Dharwar districts, a part of the Nizam's dominions and of the Mysore State and North Kanara (Yazdani 1982).

The Nasik inscription of Gautamiputra Satakarni states that the king issued orders while camping at Vaijayanti i.e. Banavasi in North Kanara district. An inscription of Pulumavi, a later Satavahana ruler of the third century CE has been recorded at Myakadoni, near Bellary. It refers to the area around as Satavahanahara i.e. the *ahara* (district) of the Satavahanas. The Pallava copper plate grant found at Hirehadagali, also in Bellary district, mentions that the area near about this place was known as *Satahaniratta* i.e. *Satavahana-rashtra* or the territory of the Satavahanas (Desai 1970). It is possible that a part or region of Karnataka was occupied by the Pallavas in the period of second to fourth centuries CE. The Hirehadagali plates of Sivaskandavarma provide evidence for Pallava rule in Karnataka though the details are not given. In this context it is noteworthy that Mayurasarma, according to the Talagunda inscription of Kadamba Kakusthavarma, built the Kadamba kingdom by overcoming the Pallava overlords (Desai 1970).

3.2.6 Kadambas - Parts of Karnataka in west came under the influence of the Kadambas from fourth century CE as indicated by their inscriptions and coins. Halmidi inscription, Talagunda inscription and Gudnapur inscription mention their political and cultural achievements. The Chandravalli inscription refers to the conquests of Mayurasarma or Mayuravarma, the first ruler of the Kadamba dynasty (Desai 1970). Their coins are said to have been *padmatankas*. However, as they do not have any legend their association with the Kadambas is often questioned. The Ramdurg hoard contains some coins of this type. The *padmatankas* are round pieces of thin gold with many punches. Such coins have been found spread across the Kadamba kingdom and therefore numismatists acknowledge them as the issues of the Kadambas of Banavasi. It is important that the word *padmatanka* is found in the inscriptions of the Kadambas. No silver or copper coins of the Kadambas have been recorded till date. Until an inscribed authentic coin of the Kadambas is discovered, *padmatankas* would have to be considered as the issues of the dynasty (Murthy 1996).

When the Kadambas came to power there were many small states ruling over different parts of Karnataka. The Banas controlled territory which included the district of Kolar in Karnataka; Tiruvallam, Vanapura, Mahabalipuram in Tamil Nadu and Cuddap in Andhra Pradesh. Alupas ruled over the Western Ghat region. The Kingdom of the Sendrika comprised Nagarakhanda and Jagadur (Jedda in the Shimoga district). Nalas ruled over the districts of Bellary and Kurnool and the Punnata kings were in power in the region south of the city of Mysore. Among them Sendrikas and Punnatas were defeated by Mayuravarma and were therefore serving as his feudatories. Others ruled as the *Mandalikas* of the imperial powers which came to be established in Karnataka.

Mayuravarma was the founder and the first historical figure of the Kadambas. When young he went to Kanchi to study the Vedas. As he was insulted at Kanchi and did not get justice, he decided to fight war. He succeeded in defeating the Pallava frontier guards and established himself at Triparvatha (Srishaila in Kurnool district). The Pallava king accepted him as “King” over territory extending from the Amara ocean (Western Ocean) to the Premara country. He now changed his surname ‘Sarma’ indicative of the Brahmana caste to ‘Varma’ suggestive of Ksatriya caste. According to M.H. Krishna, the Chandravalli inscription credits Mayuravarma with the conquests of Trekuta and Abhira on the west coast, Pallavapuri or Kanchi in the east, Sendrika and Punnata in Mysore, Pariyatrika and Sakastana in the Punjab and the North-west and Mokari or Maukhari in Kanauj. However, K.P. Jayaswal maintains that the kingdom of Mayuravarma was restricted only to Karnataka.

Mayuravarma was succeeded by his son Kangavarma. Towards the close of his reign he had to wage a war with the Vakatakas of the Basien branch. According to Ajanta inscription in Cave 16, king Vindhyaasena attacked Kuntala and conquered it. After this victory, the Vakatakas declared themselves as the lords of Kuntala. Bhagirathavarma succeeded his father Kangavarma. S. Srikantha Sastri is of the view that the coins bearing the legend *Bhagi* must have belonged to him. His son was Raghuvarma who was successful in consolidating the Kadamba kingdom (Murthy and Ramakrishnan 1977). It is generally held by scholars that Mayuravarma was in power from 325 to 345 CE, his son Kangavarma from 345 to 365 CE, Bhagirathavarma from 365 to 385 CE and Raghuvarma from 385 to 405 CE. Raghuvarma was succeeded by his brother Kakusthavarma who ruled from 405 to 430 CE. After Kakusthavarma, the Kadamba kingdom came to be divided between his two sons Shantivarma and Krishnavarma. Both these

princes began their independent rule simultaneously at Banavasi and Triparvata respectively (Sisodiya 1978, 110).

3.3 Conclusion

The Mauryas established their provincial government in those areas which had scope for development. This resulted in an inward turn of the sphere of interest when the Mauryas left. Infact, the seats of Mauryan administration in Karnataka got established as centers of political power and after them Maharathis began to rule in the region of Karwar, Banavasi, Chitradurga and Chandravalli in about the second century BC. A large number of lead coins of the Maharathis have been collected from Chitradurga, Karwar, Aihole and Banavasi. The Maharathis were followed by the Anandas in the Chitradurga-Banavasi area. Coins belonging to Anandas have been collected from Karwar, Chitradurga, Chandravalli and Banavasi. The emergence of this local elite seems to have taken place between second century BC and the middle of the first century BC (Chattopadhyaya 1987, 728-730). This process appears to have continued after the Satavahanas also and the emergence of the Kadambas of Banavasi in the post-Satavahana period can be understood as a “local” indication of the continuity of the same process.

CHAPTER FOUR

4. EARLY HISTORIC SETTLEMENTS IN NORTH KARNATAKA

4.1 Introduction

The major early historic sites in Karnataka are Sannati, Maski, Brahmagiri, Chandravalli, Vadgaon-Madhavapur and Banavasi. All the six sites have given evidence for rich archaeological assemblage. There is a possibility that they were the early urban centers which came to be established in the beginning of the Christian era. The information available from these settlements would be examined in three separate sections encompassing sites, material assemblage and discussion. The main source for the study of the early historic period in Karnataka is material remains which have been collected in the course of archaeological excavations and explorations. The antiquities of this period include remnants of structures, pottery, stone tools, iron tools, bone objects, ornaments and terracottas. These are supplemented by coins and inscriptions. These gave insights into the standard of living that people may have enjoyed. Similarly, ornaments, terracottas and sculptures throw light on the aesthetics. Coins reveal information about internal and external exchange and the depth of monetization. Inscriptions hint at the socio-political classes and their relations and beliefs besides providing details about the script and language.

In archaeological terms the immediate phase preceding the early historic period in Karnataka is the megalithic phase which is well represented over almost the whole state. The megalithic and the early historic phases are frequently found overlapping or with the latter succeeding the former, as borne out by some of the important excavated settlements such as Maski, Sannati, Brahmagiri and Chandravalli. It would be inappropriate to conclude that the early historic culture

in Karnataka evolved entirely and only out of the preceding megalithic phase, as it had certain distinguishing traits of its own such as the use of the Russet-coated Painted Ware, the construction of large brick structures, the making of sculptures, coins of pre-Satavahana and Satavahana period, script and inscriptions. The early historic culture in Karnataka has been dated to the beginning of the Christian era by most of the excavators who have identified this culture (Murthy 1987-88).

4.2 Chronology

Early historic period in Karnataka is normally placed between third century BC to third century CE. This chronological bracket however does not imply that early historic culture showed uniform patterns in terms of space and time. While at Vadgaon-Madhavapur it came to the fore as early as third century BC, at T. Narasipur its beginnings can be traced only to first century CE. The early historic culture in Karnataka may be broadly divided in two phases - early and late. The early phase is from third century BC to first century CE. The second phase can be seen from first century CE to third century CE. Early historic culture appears to have flourished during the second phase. Excavations at Chandravalli, Brahmagiri, Maski, Piklihal, Vadgaon-Madhavapur and Sannati have demonstrated that early historic culture with its characteristic features such as permanent structures, Russet coated kaolin painted ware, metal and stone objects, ornaments particularly beads, terracottas and sculptures, coins, inscriptions and script flourished in the period from first century CE to third century CE.

4.3 Early Historic Settlements and Archaeological Assemblage

The archaeological excavations and explorations undertaken since the middle of the twentieth century have thrown much light on the early historic culture in Karnataka. In the following sections major excavated as well as explored settlements and the material assemblage recovered is discussed.

4.3.1 Excavated Settlements

4.3.1.1 Chandravalli - One of the earliest excavations which helped in establishing the early historic phase in Karnataka was conducted by M.H. Krishna at Chandravalli (district Chitradurga) (Fig.4.1). Chandravalli (or Moon-village) lies in a triangular valley of the same name formed by three hills, the Chitradurga, the Kirakanakallu and the Cholagudda. Two water courses, old and new, run through the site in a north-south direction. A large number of lead and potin coins of the Satavahanas, coins of the Anandas and Maharathis and a Roman silver piece of Augustus Caesar were found. Remains of foundations and flooring of large bricks came to light in the course of excavations (Krishna 12-13, 17-18). A brick structure was discovered which according to the excavator appeared to be a house. The walls were 18" thick and the bricks were placed one over the other in the English bond system. Red earth was used as the cementing material to hold the bricks together. The house was rectangular and had many living rooms. The bricks were big and measured 18" x 9" x 3 ½". The size of the bricks is almost same to the ones found at the apsidal chaitya at Brahmagiri. On the floor of the house antiquities including the coins of Maharathi Sadakana Kalalaya were found. The structure has been dated to second century CE on the basis of the Maharathi coin. One more house with rooms was noted. In one of the rooms was seen a fire place. The bricks were slightly smaller in size measuring 16" x 8" x 3". The structures had no foundations of gravel but of made up earth. No objects or coins were found here. A portion of the house was found. The walls had six courses of bricks, each

brick measuring 18" x 9" x 4" and the walls were 19" thick. A mixture of red earth and sand appears to have been used as mortar. Many brick walls were recorded. They had bricks measuring 16" x 7½" x 3". Many coins of the Maharathis were found associated with these brick walls. Near an L shaped wall was recorded a Roman coin of Augustus and a lead coin of Maharathi Sadakana Kalalaya (Murthy 1987-88). The excavator attributed the white painted red pottery to the Satavahana period. An inscription in Brahmi characters and Prakrit language belonging to the Kadamba ruler Mayurasarman was recorded (Krishna). M.H. Krishna concluded that the cultural assemblage belonged to the Satavahana period as he had come across a large number of lead coins of this dynasty at many places. He had postulated two sub-divisions for the Satavahana period, namely early Satavahana and late Satavahana. This classification was done mainly on the basis of coins of the early and late rulers (Murthy 1987-88).

Chandravalli was excavated again in 1947 by R.E.M. Wheeler. An underground drain flanked on either side by bricks set on edge and traced to a length of two feet, a brick wall traced to a maximum length of 6 ft., a collapsed brick wall and a rubble foundation were found. These structures have been dated to the Satavahana period. Wheeler (1948) noted pottery (both painted and unpainted) and many coins. The yellow painted ochre colored ware included designs in white or yellow executed in lime or kaolin paste under a thin ochreous wash, often with apparent evidence of salt glazing (Fig.4.2). The main fabrics found at Chandravalli were black-and-red ware, red ware, black ware, brownish black polished ware, grey ware, buff ware and brown ware. The predominant shapes comprised of a bowl, bluntly beaked dish, dish, deep beaker, carinated dish, carinated basin, vase, vessel, carinated vessel, carinated vase, lamp, etc. Sherds with Rouletted pattern were collected (Fig.4.3). A large number of coins of the Satavahanas, local chiefs such as Maharathis, Anandas and Romans came to light ((Fig.4.4, 4.5, 4.6). These coins

belong to Vasisthiputra Pulamavi, Sri Yagna Satakarni, Sadakana Kalalaya Maharathi, Sadakana Chutukanha Maharathi, Maharathiputa and Chutukulananda. These coins were made of lead or potin. According to Wheeler the main phase of occupation seems to have been in the first-second centuries CE (Wheeler 1948).

Chandravalli was excavated one more time by V. Mishra. A massive structure (4.20 x 2.50 m) comprising many rooms and several floors was found. The pottery recovered included the Russet coated Painted Ware, reddish buff ware and a jar comparable to amphora in red ware. A large number of lead, copper and potin coins were found. An important discovery was that of beads made of agate, carnelian, rock-crystal, jasper, faience, lapis lazuli, paste, glass, shell and terracotta, bangles, copper and terracotta ear, nose ornaments and needle shaped rod. An unusual find was that of ivory dice. Terracottas collected included both human and animal figurines such as *Vamanaka*, mother-goddess, nagas and standing nude male (I.A.R 1977-78, 27-29).

The date when early historic period came to a close at Chandravalli is not very certain but coins of the Anandas and Maharathis suggest that habitation may have continued under the successors of the Satavahanas till the fourth century CE or so (Sharma 1987).

4.3.1.2 Brahmagiri - Along with Chandravalli, Wheeler excavated Brahmagiri (Fig.4.7) in 1947. Brahmagiri is a granite outcrop rising some 600 ft. above the plain. The presence of Asokan inscription at Brahmagiri is significant for understanding Mauryan history. The village of Siddapur where three adjacent copies of Asoka's Minor Rock-edict No.1 have been found lies in its neighbourhood, Brahmagiri itself may have been the same as the township of Isila mentioned in the edict. A small brick chaitya was discovered. There was no

evidence of the former stupa within the apse and it seems to be of a fairly early date (Wheeler 1948). It is about 22 ft long and 12 ft wide. It has an entrance of nearly 3 ft in the opposite wall of the apsidal side. The foundation is of brick stone rubble over which the courses of brick are laid. The bricks used here measure 17" x 9" x 3½". In and around the structure was found Russet coated kaolin painted ware. It is possible that the structure may have belonged to the Satavahana period and accordingly can be dated from the middle of the first century CE to third century CE (Murthy 1987-88). The pottery discovered seems to be sophisticated especially when compared to the pottery of the preceding megalithic phase. A potin coin was collected on the surface (Sharma 1987). The pottery showed a wide range including grey ware, black-and-red ware, Roulettled ware (Fig.4.8), Russet coated kaolin painted ware (Fig.4.9), red ware, polished black ware, polished brown ware and buff ware. The pottery was decorated with a variety of simple rectilinear or slightly curvilinear designs. The main shapes were dish, bowl, bluntly carinated dish with an internally beaked rim, globular bowl, pot-bellied vessel, globular vessel, carinated vessel, etc. A small number of stone objects were found which included axes, blades, scraper, rubbers, discs, balls and pestle. Similarly, only few iron objects were found, such as tanged knives, sickles, boring tool, hooks and nails. Other metal objects comprised of a spiral ring, bracelet, rattle, bell, all of bronze. Ornaments recovered in the course of excavation consisted of beads made of magnesite, shell, terracotta, agate, carnelian, glass, jasper, steatite and bangles of shell, clay, bone, bronze, gold and glass. There were interesting finds of rings of bronze and shell. A shell pendant was collected. Terracottas which were reported comprised of discs, marble, truncated cone, a lid-like (?) object with a frieze of elephants on the exterior. Brahmagiri can thus be dated to a period from the middle of first century CE to third century CE (Wheeler 1948).

4.3.1.3 Maski - Excavation was undertaken at Maski (Fig.4.10) in 1954 by B.K.Thapar. Maski (15⁰57'30" N.latitude 76⁰39'15" E.longitude) is located on Maski nullah, a tributary of the Tungabhadra. Maski is surrounded on three sides by gneissic outcrops rising about 400 ft above the plain. Excavation by Thapar (1957) resulted in the discovery of a rich variety of pottery which included Russet coated painted ware (Fig.4.11), red-slipped ware, black-and-red ware, grey ware, black ware and Rouletted ware. The painted decoration consisted of both linear patterns essentially rectilinear or criss-cross. The main shapes were dish, bowl, vase, round bottomed vase, basin, sprinkler, jar. A few brick bats of the dimensions ? x 9x3 inches were collected. The stone objects found here were asymmetrical flakes, parallel-sided blades, cores, balls, mortar, disc and marble. Metal objects recovered included nail and blade of a dagger or knife, both made of iron as well as copper bangle and a copper broken bell. Ornaments discovered at Maski consisted of beads, bangles and rings. The site proved to be immensely rich in beads for a large number of them made of shell, glass, white paste, carnelian, jasper, lapis lazuli, quartz, chalcedony, coral, garnet, agate, amethyst and terracotta were reported. Shell and glass bangles and finger-rings of shell were noticed. The popularity of shell at Maski was reflected by beads and bangles. Terracottas included spools, discs, flesh rubbers and figurine of a bird, possibly a parrot. A torso of a standing female figure is particularly noteworthy (Fig.4.12). Animal remains of the Indian domestic buffalo and the domestic sheep were collected. An important discovery which brought Maski to limelight was that of an Asokan inscription. The eight line inscription found in a rock shelter is a version of the Minor Rock Edict and mentions the name of Asoka as its author. An ancient lead coin was recovered from the latest levels. Its date has not been yet fixed (Thapar 1957). Early Historic culture at Maski has been dated from first century CE to third century CE (Murthy 1987-88).

4.3.1.4 Piklihal - Piklihal, which is about 25 km west of Maski, was excavated by Allchin in 1952. Although Piklihal is essentially a neolithic site it did give evidence for the early historic period. The pottery of the early historic period consisted of red ware, black ware, Russet coated kaolin painted ware and black-and-red ware. A wall and gravel floor were noticed. The metal objects recorded included iron arrowhead, knife, sickle, copper disc, hook and bangle. Beads made of shell, glass, terracotta and semi-precious stones were collected. Animal remains of Indian humped cattle and Indian buffalo were found (Allchin 1960). The early historic culture at Piklihal has been dated to first century CE to third century CE (Murthy 1987-88).

4.3.1.5 Hallur - A site which does not have a stratified deposit of the early historic period but where early historic remains have been collected is Hallur, located on the left bank of Tungabhadra. It was excavated by M.S. Nagaraja Rao in 1965. The early historic pottery found consisted of black-and-red ware, Russet coated painted ware, red-slipped ware and all black ware. The decoration was in the form of criss-cross patterns. The main shapes were of a squat pot or basin, bowl, shallow dish, bluntly carinated shallow dish, vessel, globular vessel, lid, short spout, sprinkler and cup. Stone and metal objects included an axe and a knife blade or dagger of iron respectively. From the early historic levels a bone point, shell pendant and conch shell were collected. Terracotta beads of areca nut shape were found (Rao 1971).

4.3.1.6 Vadgaon-Madhavapur - A site which has given prolific evidence for early historic culture is Vadgaon-Madhavapur (Fig.4.13). It is spread over an area of 24.28 to 28.33 hectares and has an occupational deposit of about 9 m. It was

excavated over seven seasons by M.S. Nagaraja Rao, B.K. Gururaja Rao and A. Sundara, starting from the early nineteen seventies and continuing till the close of that decade. Excavations brought forth extensive structural remains, mostly made of bricks (Fig.4.14). Large rectangular structures consisting of a hall and room were found. The structures had brick paved floors. The walls of these structures were made of baked bricks measuring 34 x 37 x 10 cm. In the construction of these structures more than one phase has been identified. A square well lined with bricks with the dimensions of 24 x 24 x 7.8 cm was found. Similarly a circular well built of wedge-shaped bricks was recorded. A water cistern was located. The bricks used in the construction of this cistern measured 44 x 27 x 10 cm. A storage bin with brick lining on all the four sides was noted. Parts of a drain were recorded. A sewage pit was exposed to a depth of 7.25 m. A house with two rooms opening to a common verandah was located. A soakage pit and a moat were discovered. Parts of well paved brick platforms along with rubble foundations were noted. Circular storage pits were exposed. An important discovery was part of a street which was more than 100 m in length, 7 m in width and had a stratigraphic succession of seven phases. Close to the street was a baked brick circular granary. Along with these structures, tiled roof, remains of brick walls occasionally plastered with lime and remains of rammed floor were found.

The pottery (Fig.4.15) discovered included black-and-red ware, red ware, Russet coated white painted ware, etc. Among the metal objects notable was a thick copper wire. Animal bones and grains of paddy were recovered. Ornaments at the site included mainly beads made of shell, terracotta, glass and semi-precious stones. Excavations brought to light a rather rich assemblage of terracottas which comprised of both human and animal figurines. Some of the noteworthy figurines were of a standing man with right hand probably in *abhaya-mudra* and upper garment running over the left shoulder (comparable to standing Buddha), figurines

of caprisoned horse, elephant heads, a hollow human head with protruberance on the top of the head, probably representing the Buddha in the western Deccan style. Ivory dices, terracotta dice and fragment of a globular pot having moulded relief on the exterior, showing probably a seated two handed Ganesa are some of the other important finds. A large number of coins were recorded. These included punch-marked coins, copper, lead and potin coins of the Satavahanas, coins of the Kshatrapas and a Roman silver coin. A crucial find was that of coin-moulds (*I.A.R*, 1971-77).

4.3.1.7 Banavasi – Banavasi (Fig.4.16) is another extremely important site for the understanding of early historic period in Karnataka. Banavasi was surrounded by a fortified wall which was repaired in two phases according to the excavator (Sharma 1987). Huge brick apsidal structures of the Satavahana period were found (Fig.4.17). Excavation of a large mound brought to light an apsidal brick structure. It has three concentric walls of brick and there is a platform 1.5 m thick at the frontal entrance. The complete structure measured 22.5 x 12.5 m. The space between the two walls was used as circumambulatory passages. As the structure gave evidence for Russet coated kaolin painted ware in plenty, it has been dated to the early centuries of the Christian era. A big structure measuring 26 x 13.5 m has been recorded. It also has a rectangular frontal platform and an apsidal back. It has two concentric walls running parallel. The thickness of the outer wall was about 1.5 m while the inner wall was marginally thinner. It had foundations of about 2 m. The bricks of both the structures were similar in fabric and measurement. Antiquities such as Russet coated kaolin painted ware, imitation Rouletted ware and coins of the Satavahanas (Fig.4.18, 4.19, 4.20) were found in association with the structure. Below these levels a punch-marked coin was

collected. It is noteworthy that the structures found at Banavasi bear similarity with the one which was excavated at Brahmagiri. On the basis of the pottery and coins that were recovered the structure has been attributed to the Satavahana period. The pottery collected included the red ware, black-and-red ware, the imitated Rouletted ware and Russet coated kaolin painted ware (Fig.4.21). The layers which gave pottery also yielded a punch-marked coin. Coins of the Satavahanas and of Chutukulananda and Mudananda were collected. Roman pottery was found along with a soapstone coin-mould of the Roman type. The mould is exactly similar to the reverse of the Roman coin belonging to Tiberius in which is seen a female figure sitting on a chair holding a long scepter in the right hand and a branch of a tree in the left hand. There is also the legend *Maxim Pontif* on either side of the figure (Fig.4.22). A large number of beads (Fig.4.23) of terracotta and other material have been recorded. A soapstone bead mould has been found. Excavation resulted in the discovery of some interesting terracotta figures (Fig.4.24, 4.25). One of them is a female figure made from a double mould. It has a dark red slip. The figure is standing but the legs below the knees are broken. The large rings she has in her ears are noteworthy. She is shown wearing a broad necklace. The plain bangles can be seen in her hands. Her dress is executed in incised lines. Another terracotta is a torso of a human figure made from a double mould. It has a fine head dress which is decorative. The dress of the figure is shown by criss-cross lines in the front. Yet another terracotta consisted of two pieces of lower limbs in which the leg ornament is shown clearly modelled. An interesting piece is a portion of a hand with fingers and bangles well depicted. These terracottas are typical of the Satavahana art (Murthy 1987-88). The ceramic evidence indicates that Banavasi was a flourishing city in the third century BC. A fragmentary inscription in box headed characters mentions the

name of early Kadamba rulers which hints that occupation may have continued till sixth century CE (Sharma 1987).

4.3.2 Explored Settlements

Along with excavated sites a large number of explored sites in North Karnataka have given useful information about the early historic period. Some of the important early historic sites in district Bidar are Bhalki, Bhatmbra, Chitta, Lanjawada, Yannukura, Bagadal, Sangolgi, Bapur, Khadwad, Anduru, Kamthan, Sirsi and Sedol. At Bapur and Khadwad grey ware and red ware were collected (*I.A.R* 1977-78 26;1984-85, 29-30). Explorations in district Gulbarga resulted in the discovery of a large number of early historic sites such as Malkhed, Chandapur, Hannur, Hire Nandur, Lambadi Tanda, Diggaon, Mogla Hal, Devargonal, Devapur, Hagarti, Alhalli, Hanganahalli Hal, Hanumanahalli, Udighal, Ranjol, Bolewad, Gottam Gutta, Gundagurti, Kalla Bennur, Mahagaon, Matti Madu Hal, Mukta, Srinivas Saradgi, Balachakra, Hunsgi, Roja, near Kollur, Hasargundgi, Anbi, Kanaganahalli, Gonalhal, Jewargi, etc. Red polished ware and red ware were noted at Malkhed while black-and-red ware, Russet coated painted ware and red-slipped ware were recorded at Chandapur and Devargonal. At Roja Rouletted ware and black ware were collected whereas Hasargundgi gave the evidence for black-and-red ware and red ware. Typical early historic pottery was noticed at Hunsgi and near Kollur. Fragments of terracotta figurines were found at Chandapur while fragmentary sculptural remains and an inscribed *chhayapratima* were reported from Hasargundgi and Anbi respectively. Remains of furnaces for making beads were discovered at Devargonal. At Hasargundgi were found fragmentary stambhas, fragmentary coping stones, octagonal pillars and their bases. These may have belonged to a structure with railing. Inscriptions of first-

second century CE were noted at Kanaganahalli (*I.A.R.* 1986-89, 67; *I.A.R.* 1974-75, 18; *I.A.R.* 1975-76, 21; *I.A.R.* 1976-77, 25; *I.A.R.* 1985-86 41; *I.A.R.* 1990-91, 30; *I.A.R.* 1991-92, 45-46). A Satavahana coin was collected at Gonahalli whereas Jewargi gave evidence for limestone slabs of sculpture of the Satavahana period (Murthy 1987-88).

Early historic remains in district Bijapur were identified at Hathahalli, Musalvadi, Yarual, Hippargi, Kauroli, Vaskannali, Chikkallapur, Yalgod, Gorav Gundagi, Sungthan, Bankotgi, Salvadgi, Baur, Devangaon, Alur, Inachgal, Kavidimatti, Kuntogi, Nalwatwad, Rakasgi, Devalgi, Bidarkundi, Badami, Asagi, Kalhalli, Akkaragal, Bachinmaradi, etc. Sites such as Salvadgi, Baur, Devangaon gave the evidence for black-and-red ware, red-slipped ware while black-and-red ware and Russet coated painted ware were collected at Devalgi and Bidarkundi. Red ware was recorded at Asagi (*I.A.R.* 1958-59, 32; *I.A.R.* 1959-60, 37; *I.A.R.* 1960-61 28; *I.A.R.* 1961-62 34; *I.A.R.* 1962-63, 16; *I.A.R.* 1974-75, 17; *I.A.R.* 1990-91, 25). Red-slipped ware, Russet coated ware, red polished ware were recovered from Hathahalli, Musalvadi, Yarual, Vaskannali, Hippargi, Kauroli, Chikkallapur and Yalgod.

In district Raichur early historic culture was identified at Chinohala-kote, Kankargol, Ullenoora, Badarli and Kunnatgi. Explorations at Chinohala-kote led to the discovery of Russet coated painted ware and black-and-red ware (*I.A.R.* 1961-62, 102; *I.A.R.* 1962-63, 16; *I.A.R.* 1978-79, 10). Russet coated kaolin painted ware was also found at Hallur, Hosakere and Somanala (Murthy 1987-88). Evidence for the early historic period in district Bellary could be located at Nittur, Udegolam, on the south-western foot of the Bommappana Gudda, Chanduru and Thoranagal. Pottery comprising black-and-red ware, red-slipped ware, black polished ware and dull red ware was discovered on the south-western face of the Bommappana

Gudda. Early historic pottery was also reported from Chanduru and Thoranagal. A discovery of crucial significance in district Bellary was that of Asokan Edicts at Nittur and Udegolam. In these edicts there is mention of the name Asoka. The content of these edicts is almost similar to each other (*I.A.R* 1977-78, 25; *I.A.R* 1981-82, 93; *I.A.R* 1987-88, 33).

District Dharwar seems to have been particularly rich in the remains of the early historic period. This is clearly indicated by the large number of sites such as Ittagi, Akkur, Handignur, Sangur, Hosritti, Mannur, Haralhalli, Talihalli, Kanchargatti, Kolur, Narasipur, Tadas, Sidenur, Anur, Kadarmandalgi, Motibe-nnur, Belkeri, Kummur, Madapur, Honatti, Yattinhalli, Gudgur, Belur, Kudri-hal, Hildahalli, Udagatti, Fatepur, Nitpalli, Kotihal, Holi-Anveri, Mudnur, Medleri, Chandapur, Chandanpur, Kuli, Chikmagnur, Godihal, Kuppelur, Mudenur, Dombarahalli, Ukkund, Benkankonda, Kuskur, Dandgihalli, Airani, Bellatti, Chodhal, Hirevidare, Itga, Itagi, Mangod, Nagarmadu, Tangadu, Unkli, Adarkatti, Battur, Holalapur, Hullur, Jirmadapur, Lakshmeshwar, Nave-Bavnur, Nittur, Shankhadal, Yevatti, Shirnahalli, Akki Alur, Vasana, etc. Pottery such as black-and-red ware, Russet coated ware and dull red ware was collected from Handignur, Sangur, Hosritti, Mannur, Haralhalli, Talihalli, Kanchargatti, Kolur, Narasipur, Tadas, Sidenur, Anur, Kadarmandalgi, Motibennur, Belkeri, Kummur, Madapur, Yattinhalli, Hildahalli, Udagatti, Honatti, Gudgur, Belur, Kudrihal, Fatepur, Nitpalli, Kotihal, Holi-Anveri, Mudnur, Medleri, Chandapur, Kuli, Chikmagnur, Godihal, Kuppelur, Mudenur, Dombarahalli, Ukkund, Benkankonda, Kuskur and Dandgihalli. Russet coated painted ware was found at Airani, Bellati, Chodhal, Hirevidare, Itga, Mangod, Nagarmadu, Unkli, etc. A hoard of forty-six gold coins including issues of Augustus (29 BC-14 CE), Antonius Pius (138-161 CE), Theodosius II (408-450 CE), Marcian (450-474 CE), Zeno (474-491 CE), Anastasius (491-518 CE) and Justinus I (518-527 CE) was collected at Akki Alur. Inscriptions of second-third

century CE were discovered at Vasana (*I.A.R.* 1954-55, 62; *I.A.R.* 1957-58, 39; *I.A.R.* 1958-59, 32; *I.A.R.* 1959-60, 38; *I.A.R.* 1960-61, 28; *I.A.R.* 1961-62, 34; *I.A.R.* 1962-63, 16; *I.A.R.* 1976-77, 71; *I.A.R.* 1980-81, 27; *I.A.R.* 1981-82, 79).

4.4. Remains of Material Culture

4.4.1 Structures - An important feature of the early historic period was the building of varied type of structures. The construction of structures distinguished this phase from the preceding megalithic period when one comes across extensive burial vaults made of stone but almost no other structures. The structures which came up in the early centuries of the Christian era, mostly from first to third century CE can be broadly divided as secular and religious. The secular structures included rooms, halls, wells, water cistern, storage bin, drain, sewage pit, soakage pit, moat, platforms, storage pits, floors, street, granary, fortification wall, etc. Among the religious structures which were built during this period, notable were the stupas, chaityas and brick temples. An important feature which characterizes both secular and religious buildings of the period is the extensive use of bricks. Furthermore, bricks used show a certain uniformity in texture, quality and size as for instance at Brahmagiri they measure 17 x 9 x 3½ inches, at Chandravalli 17 x 9 x 3½ inches, 18 x 9 x 4 inches, 18 x 9 x 3½ inches, at Banavasi 16 x 9 x 3½ inches, at Vadgaon - Madhavapur 18 x 9 x 3½ inches and at Pattadakal 16 x 9 x 3 inches (Murthy 1987-88). The popularity of bricks which were made of laterite could be due to the nature of laterite. Laterite is highly porous, soft and can be cut into blocks and dressed in the form of bricks. The easy availability of laterite almost throughout the state must have facilitated the production of bricks. However, stone continued to be used though on a small scale for memorial pillars, slabs and

sculptures. Bricks began to be frequently used for construction as they were economical in terms of production.

Structures which have been brought to light so far include stupas, chaityas, temples, halls, rooms, wells, water cistern, drains, soakage pits, moat, platforms, streets, granary, fortification wall, etc. These have been placed in the time bracket of first to third century CE largely on the basis of associated datable finds such as coins and pottery. A closer examination of these structures shows that they are well planned and scientific in their execution. People in this age seem to have attained a fairly high degree of skill in building operations as made evident by the fact that along with relatively simple structures such as rooms, soakage pits, platforms they were also building complex edifices such as stupas, chaityas, temples, fortification walls and moat. There is evidence for the use of tiles for roofs and lime plastering for walls. It is noteworthy that in the period from fourth-third century BC to first century BC there is limited evidence for structural activity.

4.4.2 Pottery - An important feature of the early historic period in Karnataka is the profuse occurrence of a wide range of pottery. The main fabrics found included the Russet coated kaolin painted ware, black-and-red ware, red ware, red polished ware, red slipped ware, buff ware, black ware, black polished ware, black-slipped ware, brown ware, polished brown ware, grey ware, slipped and polished grey ware and Rouletted ware. Among these wares perhaps the most noteworthy was the Russet coated kaolin painted ware. It was represented in black-and-red ware, red-slipped ware, red ware and was always potted on a fast wheel. The main shapes found in this ware comprised of partially straight sided bowl, globular bowl, shallow bowl, pot, bluntly carinated shallow dish, bluntly beaked dish, vessel, globular vessel, etc. Perhaps the most notable feature of the Russet coated

kaolin painted ware was its rich repertoire of designs which were normally executed on the outer surface. The designs found included groups of vertical lines, groups of oblique lines, criss-cross or trellis, radiating lines terminating in pellets, dotted lines, lines with frond like branches, hatched triangles, dentilled lines drawn vertically, horizontally or obliquely sometimes with big dots in between them, comb pattern, etc. Among the designs the most common motif was that of vertical or criss-cross lines.

Though Russet coated kaolin painted ware is one of the main wares of the period both in terms of quantity and its characteristic features, other wares have also been found, prominent being the black-and-red ware and red ware. The black-and-red ware had medium fabric showing sand and grit particles in the paste, was of thick section and almost always salt glazed. The black-and-red ware with its typical forms such as bowl, dish, lid with a flanged waist and basin with a nail-head or a variant rim appears to have continued from the preceding megalithic period but it did not have the distinctive polish and shine of the megalithic black-and-red ware (Thapar 1957). The main shapes in black-and-red ware were dish, carinated dish, dish with bluntly beaked rim, bowl, globular vessel, squat pot or basin. The red ware of the period was prepared of both fine levigated clay and medium to thick grained clay with its section being either thin or thick. The fabric of the ware was medium to coarse (Hanumantha Rao M and S. Nagaraju 1974). Some of the main shapes in red ware were dish, bluntly carinated dish, dish with bluntly beaked rim, bowl, vessel, carinated vessel, lid, carinated lid, spout, pot, globular pot, vase, miniature vase, lamp, sprinkler, carinated basin, jar, etc. The plain wares of the period were marked by incised decoration which included lines of notched or herring bone pattern, applied bands of finger tip pattern, chevrons, thumb and nail impressions. Sometimes two or three designs were seen combined. Incised

decoration was executed before the application of slip and was generally found on the exterior and shoulders of large pots.

The bulk of the pottery can be dated from first century CE to third century CE as indicated by excavations at Brahmagiri and Chandravalli. Dishes of an individual type with concentric rings of rouletted pattern round the interior of the base, the Rouletted ware, were found at both Brahmagiri and Chandravalli. This Rouletted ware was dated in 1945 at Arikamedu (Pondicherry) by its association with imported Arretine ware of the second quarter of the first century CE. The distinctive rouletted pattern which is alien to Indian ceramic is characteristic of Arretine ware and was probably derived in India from it. The Indian Rouletted ware can therefore be placed in the first or second quarter of the first century CE. At Chandravalli the Rouletted ware occurred almost throughout along with the Russet coated kaolin painted ware. According to R.E.M. Wheeler, the pottery, particularly the Russet coated kaolin painted ware can be given the time bracket of first to the end of the second or beginning of the third century CE (Wheeler 1948).

4.4.3 Stone tools, iron tools and bone objects - Explorations and excavations have brought to light the tool assemblage of the early historic period which comprised of both stone and iron tools. The use of stone continued for tool making but it was iron which was given a marked preference as suggested by its frequent availability. Stone tools such as double edged blades without retouch, parallel-sided blades, straight backed blades, side scrapers, rubbers, pestle, quern, axes, pounders and mortar were used for agricultural work and domestic chores. Stone blades and rubbers were perhaps meant for clearing hide of the animals while balls might have been used in hunting operations. Iron sickles may have belonged to the equipment of the farmer. Iron nails, hooks, and boring tool must have been

essential for the permanent structures which had started coming up in this period. Arrowheads, spearheads and daggers may have served as weapons. A very small number of bone objects such as points have been recovered thereby implying use of bone, though on a very small scale.

4.4.4 Ornaments - That people of early historic age had an aesthetic sense and that they were fond of dressing up well is manifested by their ornaments such as bangles, finger rings, ear ornaments, nose ornaments, kohl sticks, needle shaped rod, pendants and beads. These have been collected in large number and in varied raw materials. The intricate designing of the ornaments, particularly bangles and beads, shows the skill of people in jewellery making. Bangles were made of shell, bone, glass, clay, gold, bronze and copper whereas finger rings were made of shell, bronze, copper and ear and nose ornaments were of terracotta and copper. Beads showed considerable variety both in raw material and the shapes given to them. They were made of glass, shell, terracotta, crystal, carnelian, steatite, lapis lazuli, chalcedony, garnet, agate, amethyst, white paste, coral, jasper, quartz, blood stone, magnesite, faince, etc. Among the raw materials used for ornaments, it is shell which has been extensively used thus indicating the popularity of shell industry during this period. Furthermore, the wide range of raw materials used for jewellery is also indicative of social differentiation which may have characterised the society of the period. Ornaments made of shell, bone, clay and terracotta being cheaper must have been more popular with the lower segments of the society. This is also made evident by the fact that of the ornaments found, those of shell and terracotta tend to predominate. On the other hand pieces of jewellery which entailed more of labour input and were made of costly raw material such as gold

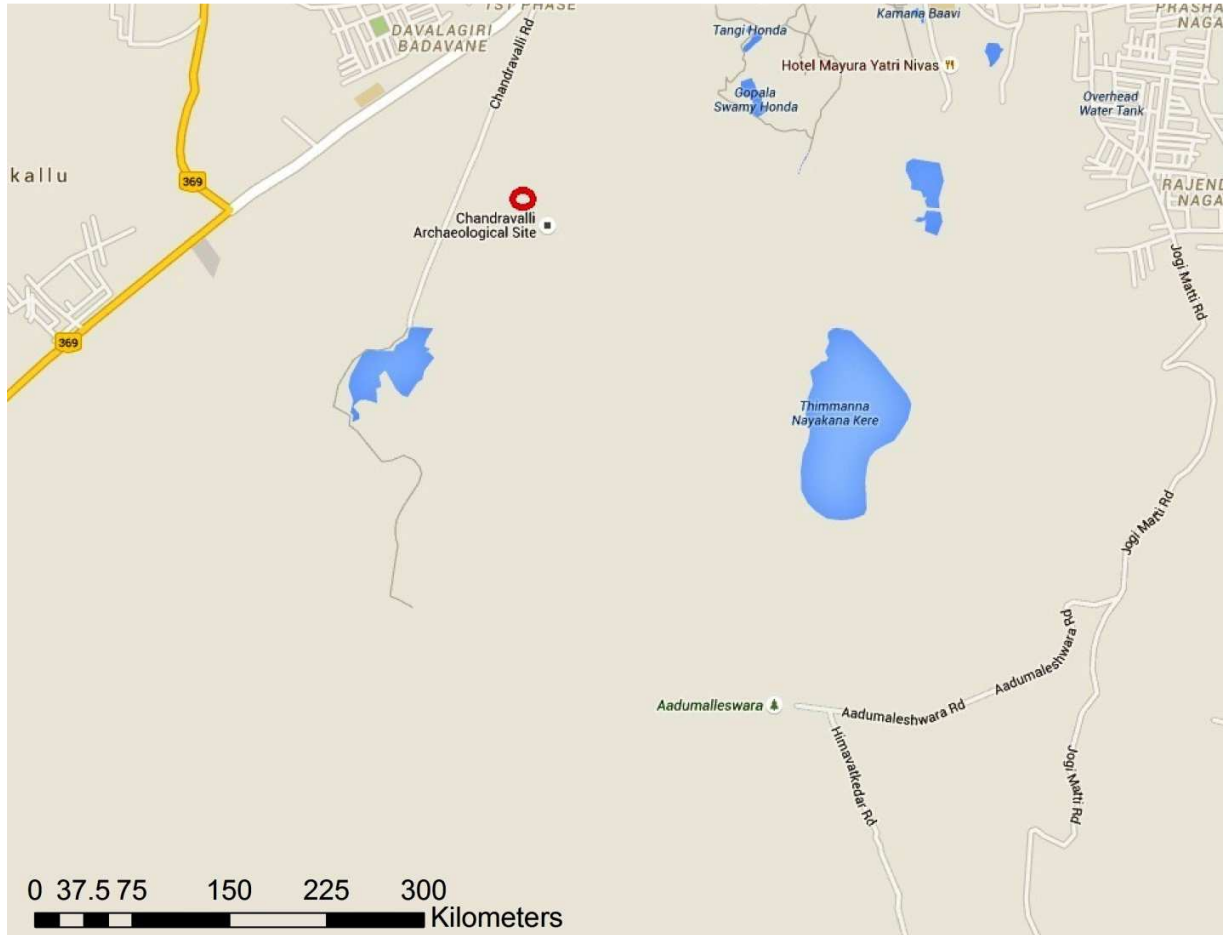
and semi-precious stones must have been exclusive and meant for the selected sections only. These ornaments can be largely dated from first to third century CE.

4.4.5 Terracottas - It appears that artistic impulses of the people were also reflected by way of terracottas which showed a marked improvement vis-a-vis the preceding period. Terracottas found comprised of discs, marble, truncated cone, flesh rubber, spool, animal and human figurines. Animal and human figurines are particularly noteworthy for their fine clay and are well modelled. They are no longer crude but show a certain degree of finesse. The features are clearly delineated and details of drapery and ornaments are finely depicted. The anatomical details demonstrate a sense of realism. Some of the interesting figurines recorded were those of *nagas*, *Vamanaka*, mother-goddess, standing nude male from Chandravalli, a figure of standing man with right hand probably in *abhaya-mudra* and upper garment running over the left shoulder, comparable to standing Buddha from Vadgaon-Madhavapur and torso of a standing female figure from Maski. The left hand of this female figure is placed akimbo while the right hand is almost pendant and assumably holds some object. The upper part of the body is bare and shows a necklace. The folds of the drapery are visible. On the back is seen a single plait of hair coming upto the waist. Terracotta discs, both pierced and unpierced have been found. The pierced discs were probably spindle whorls while unpierced discs were perhaps toys. The art of terracotta making seems to have developed considerably especially from first to third century CE. Other important finds include bells of copper and bronze, rattle of bronze, etc. The game of dice seems to have been popular during the period as suggested by the discovery of terracotta and ivory dice.

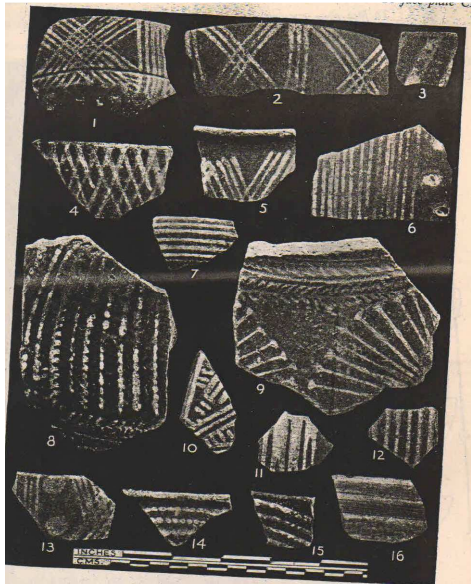
4.5 Conclusion

The findings and extensive spread of material remains particularly pottery at several excavated and explored settlements establishes that the early historic culture was widespread across North Karnataka. The usage of standardized building material such as bricks, tiles is suggestive of urban contours which had begun to show in the early centuries of the Christian era. There was major development during early historic period as made evident by material remains and this development can be located in the local environment and to an extent attributed to external influence. This development showed spatial as well as temporal variations. It seems that a complexity of factors was responsible for varying shades of development in different parts of the state. There was no uniformity in the distribution of material culture and there were areas which were distinctly rich and exhibited traits which can be considered to be “urban”, and this would be discussed in the following chapters.

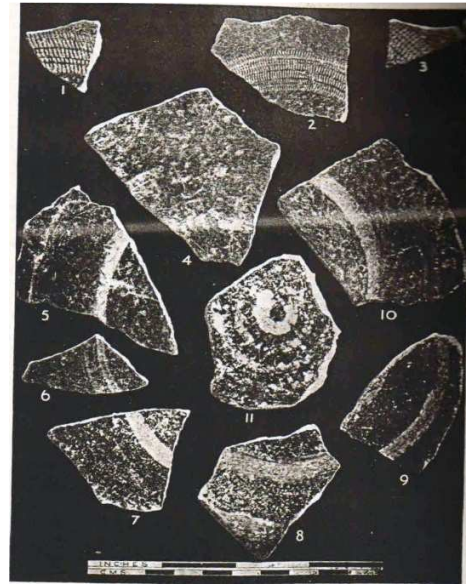
Illustrations



(Fig.4.1)



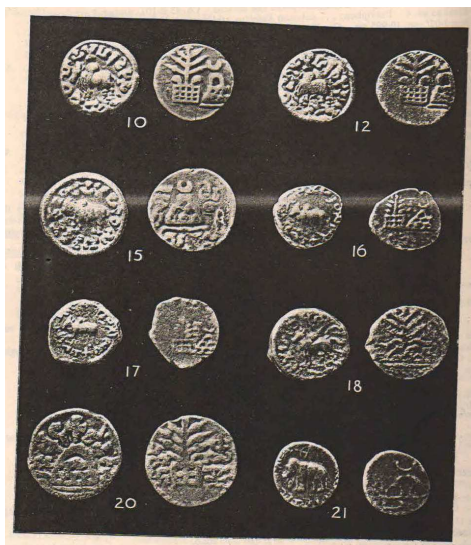
Russet-coated kaolin paintedware (Fig.4.2)



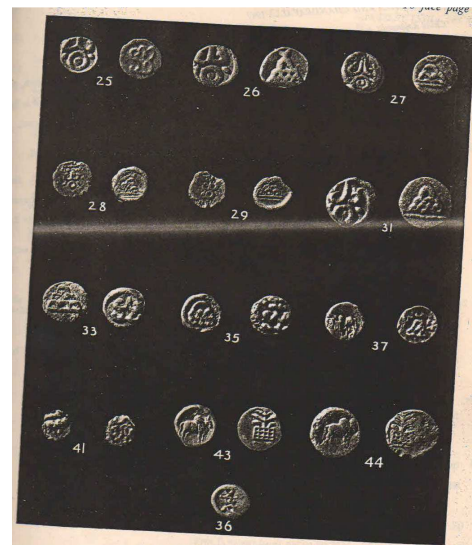
Rouletted Ware (Fig.4.3)



Denarius of Tiberius (Fig. 4.4)

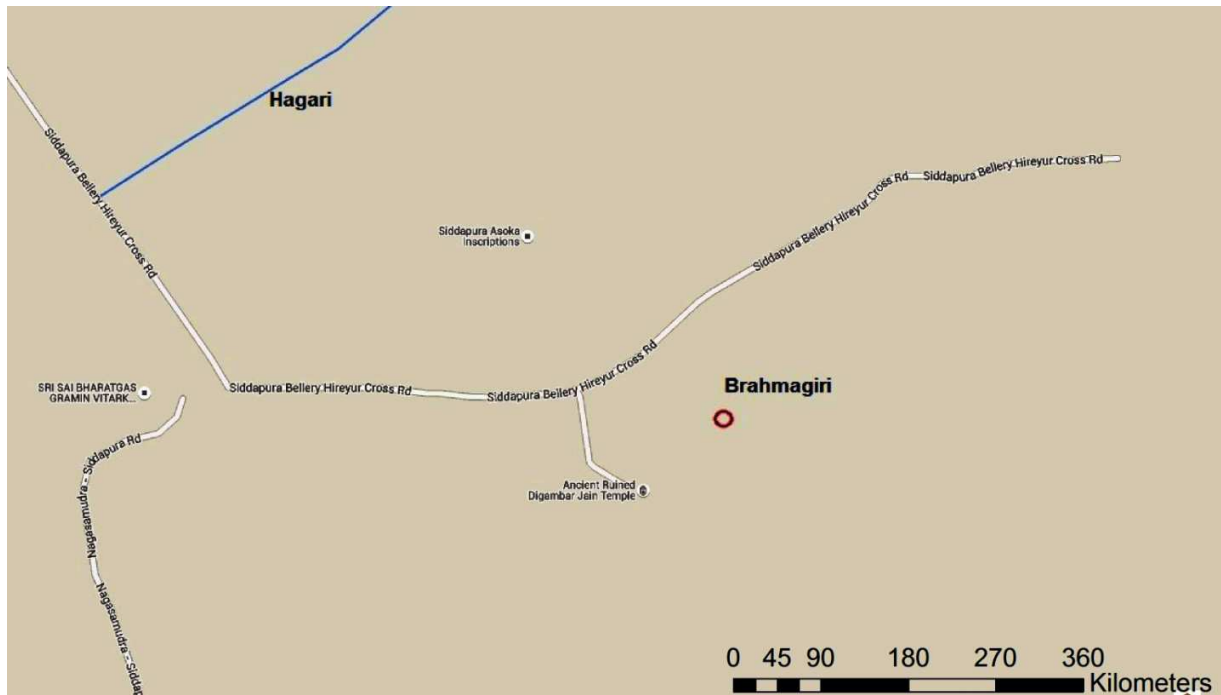


Satavahana Coins (Fig 4.5)



Satavahana Coins (4.6)

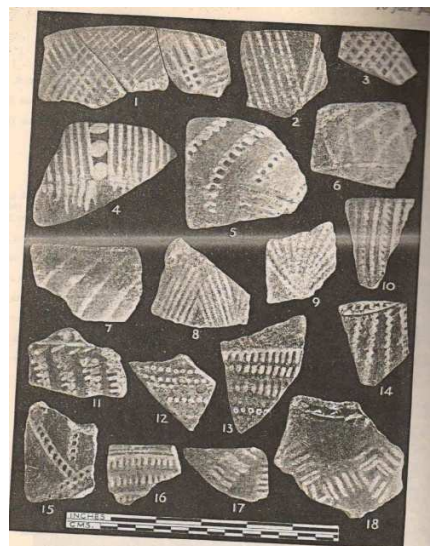
(Images - Wheeler R.E.M. , 1948, Brahmagiri and Chandravalli 1947: Megalithic and other Cultures in the Chitaldrug District, Mysore state, in *Ancient India*, no.4)



(Fig.4.7)

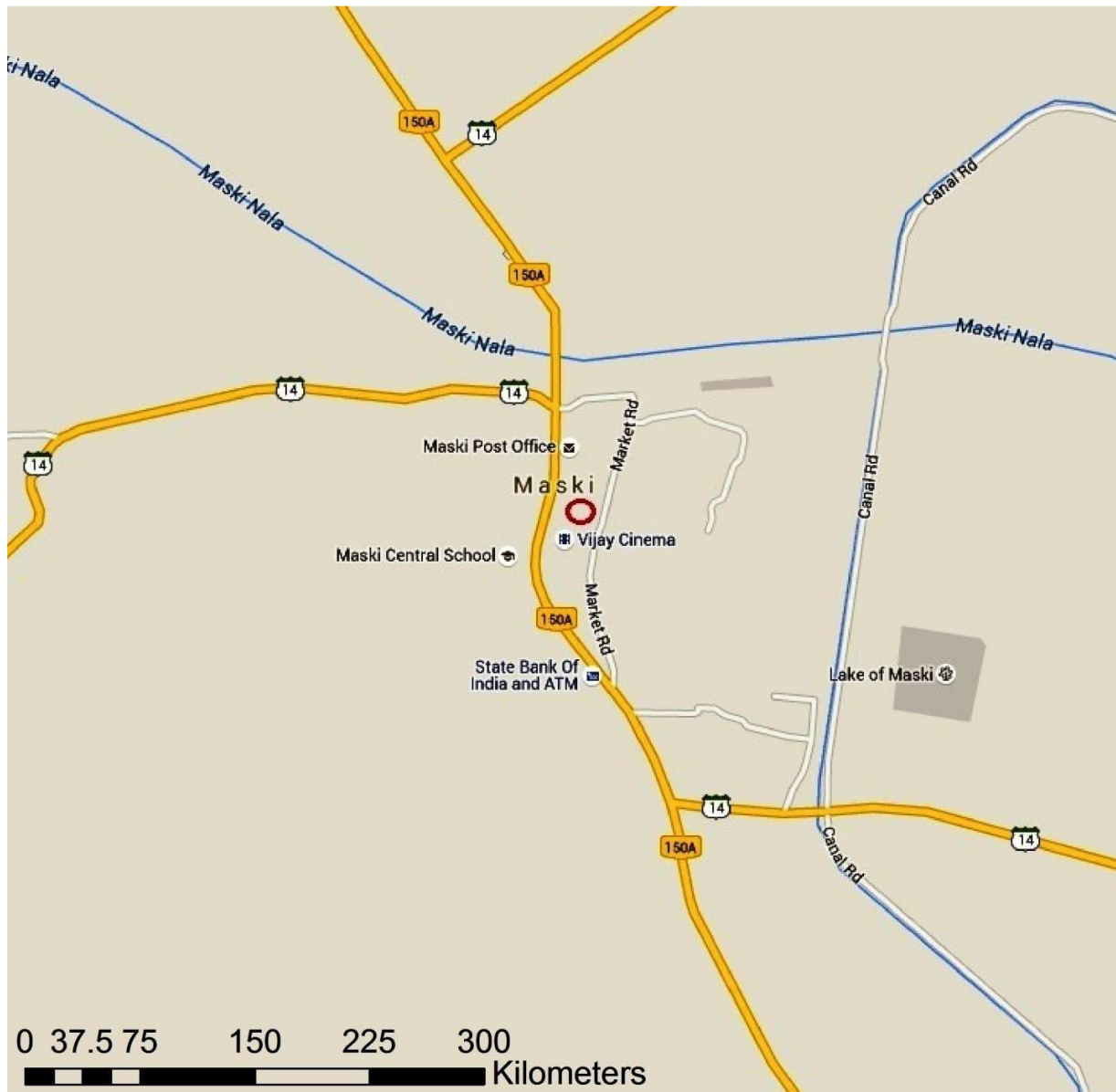


Rouletted Ware (Fig.4.8)

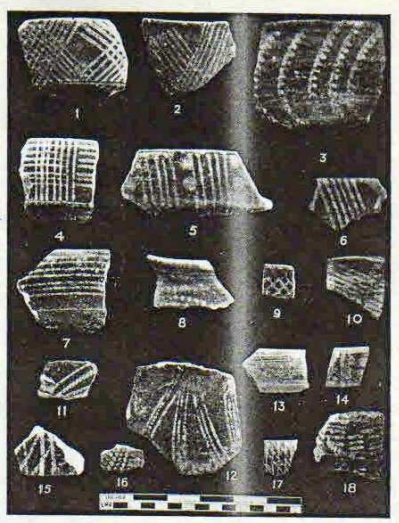


Russet-coated kaolin painted pottery (Fig.4.9)

(Images - Wheeler R.E.M. , 1948, Brahmagiri and Chandravalli 1947: Megalithic and other Cultures in the Chitaldrug District, Mysore state, in *Ancient India*, no.4)



(Fig.4.10)

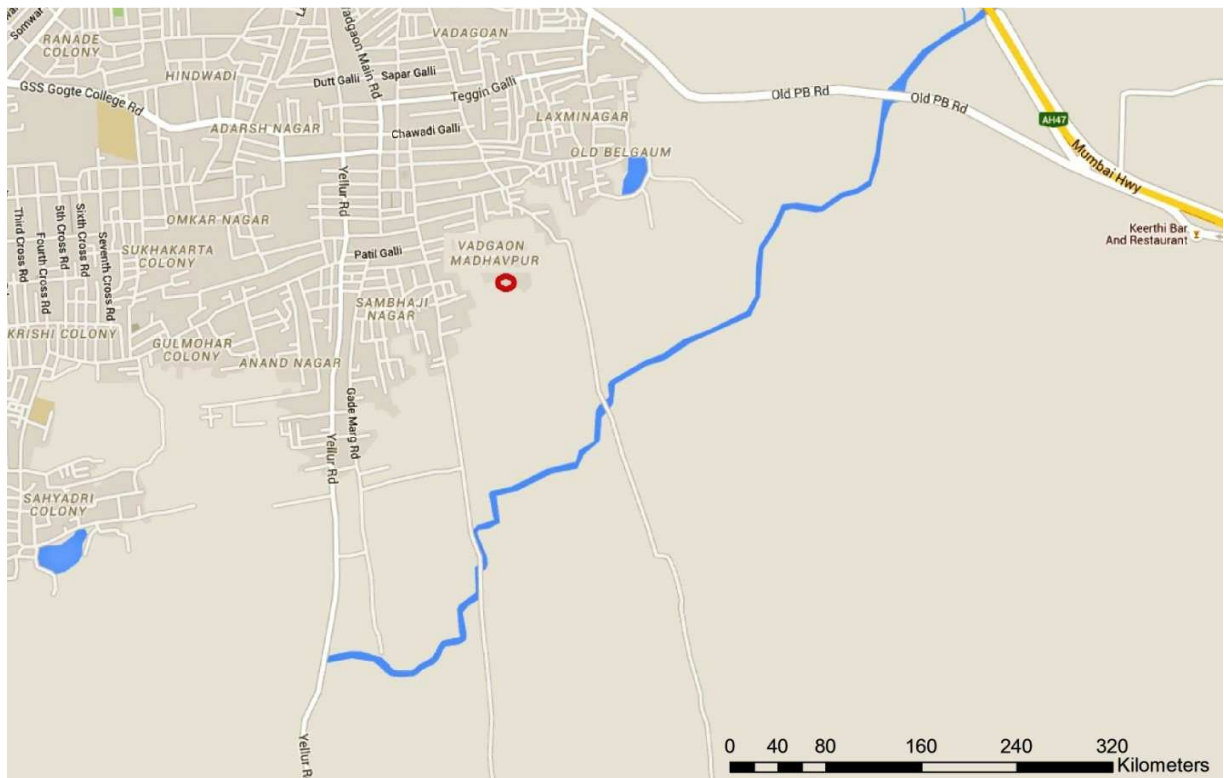


Russet-coated painted ware (Fig.4.11)



Terracotta Figurine (Fig.4.12)

(Images - Thapar B.K., 1957, Maski 1954 : A Chalcolithic Site of the Southern Deccan, in *Ancient India*, no.13)



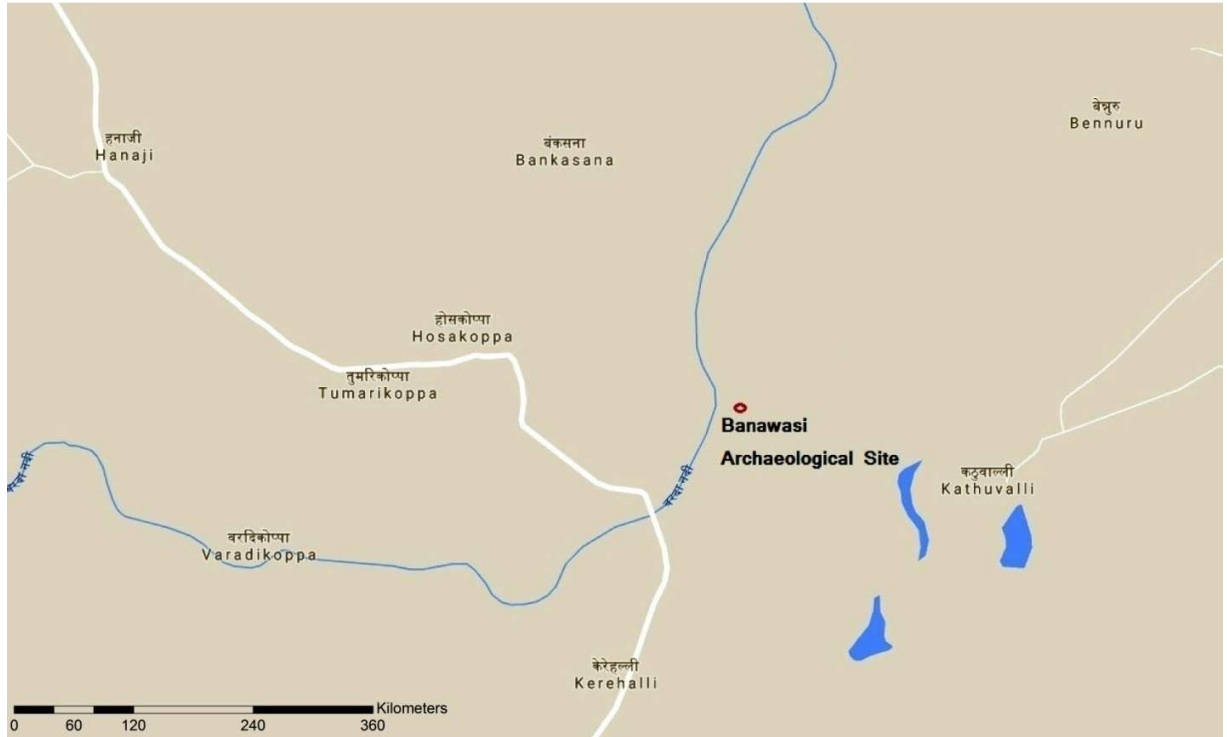
(Fig.4.13)



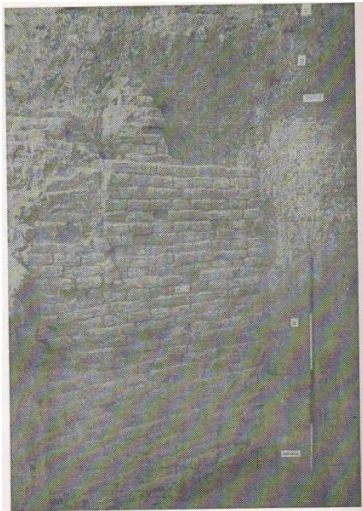
Bricks (Fig.4.14)



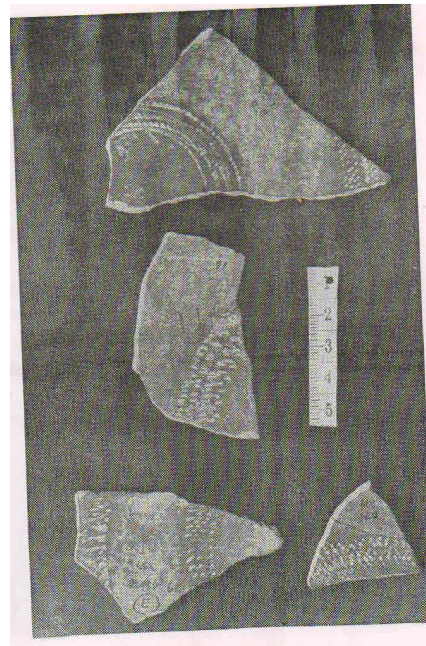
Pottery (Fig.4.15)



(Fig.4.16)



Brick structure (Fig.4.17)



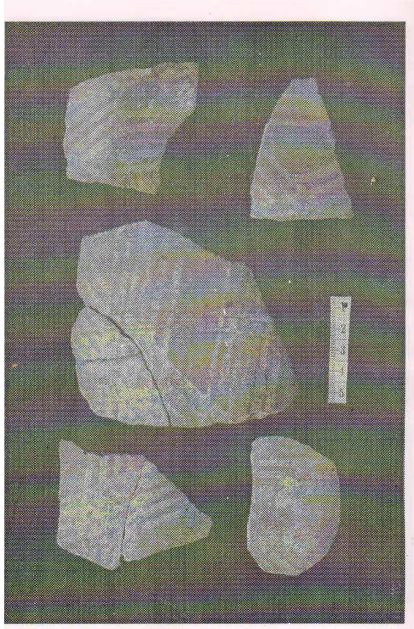
Rouletted ware (Fig.4.18)



Coins (obverse) (Fig.4.19)



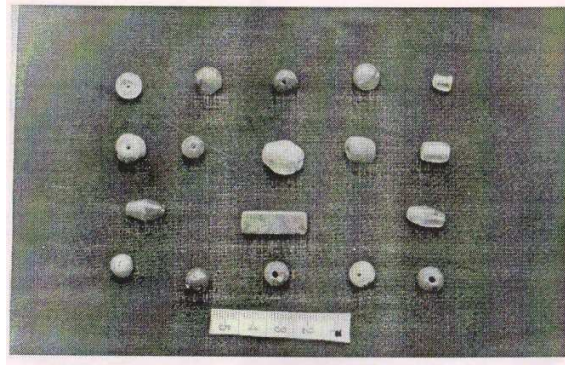
Coins (reverse) (Fig.4.20)



Russet coated kaolin painted ware (Fig.4.21)



Roman coin (Fig.4.22)



Beads (Fig.4.23)



Terracotta (Fig.4.24)



Terracotta horse (Fig. 4.25)

(Images – AV Narasimha Murthy - Excavations at Banavasi, Mysore, 1997)

CHAPTER FIVE

5. SANNATI – AN EARLY HISTORIC BUDDHIST SETTLEMENT

5.1 Introduction

Sannati (taluk Chittapura, district Gulbarga) is the principal site of enquiry. It is a Maurya-Satavahana settlement with some evidence for the megalithic age. Kanaganahalli and other adjacent sites such as Anegutti, Benagutti, Hasargundgi (Fig.5.1) are well endowed with structural remains of Buddhist affiliation, particularly stupas. The Mahastupa at Kanaganahalli is richly embellished with sculptural representations many of which are stories from Jatakas, depictions of royalty including portrait of emperor Asoka, Dhamachakra depictions, stupa and worship of relics, monastic complexes, Nagas, Yakshis, wheel of life (Bhavachakra), noblemen, retinue, vehicles and mounts, common men and servants, etc. There are many standing and seated images of Buddha. The sculptural art is immensely useful for understanding contemporary society and prevailing religious beliefs and practices. Inscriptions palaeographically datable from third century BC to second century CE in Brahmi characters and Prakrit language have been found. At Kanaganahalli alone two hundred and seventy inscriptions have been reported. Many of these inscriptions are donative and provide information about the social background of the donors and places where they hailed from. Coins belonging to various Satavahana rulers have been recorded (both in James Howell's and Prof K.P. Poonacaha's respective excavations). They are helpful in establishing a chronological sequence. The patterns which emerge on the basis of the above mentioned data from Sannati and other sites and to what extent they meet the yardsticks of urbanization in the ancient context are examined in detail in the next chapter.

Sannati was a well-known Buddhist center in Karnataka and its importance as a Buddhist establishment is reinforced by the stupas and monasteries located at nearby settlements of Anegutti, Benagutti, Hasargundgi, etc. It is perhaps one of the rare settlements in Karnataka which has given tangible evidence for a very large and fortified habitation area at Ranamandala and a mahastupa at Kanaganahalli and rich and varied archaeological assemblage belonging to the Mauryan and Satavahana period. Sannati seems to have been located on the trade route which may have added to its sources as it also received donations from local people and devotees who came from far off places like Dhanyakataka. The prosperity of Sannati is clearly reflected by the art and architecture, particularly the sculptures which exhibited various groups, people and their moods, ideologies, memories, etc.

5.2 Derivation of place names

Santimati seems to have close association with Buddhism since Lord Buddha is referred to as *Santaman*, “the one possessing tranquility of soul”. *Santimati* could be an epithet of Lord Buddha as “the one possessing tranquility of mind”. As per the oral tradition the fortified town is identified as *Ranamandala* meaning “battlefield”. The place could be the site where the Mauryas defeated the Satavahanas in a battle and incorporated this territory in the Mauryan conquered *vijita*. Anegutti is the second *stupa* site situated nearly 2 km northeast of Sannati village. It means an elevated place or a mound akin to an elephant. Etymologically, the Pali/Prakrit term *gutti*, a derivative of *gupti* in Sanskrit could mean ‘protection, defence, guard’, etc. Thus, the word Anegutti could refer to a mound or an elevated place defended by an elephant (Poonacha 2011, 14).

Kanaganahalli, meaning Kanaka seems to have direct association with Kanakmuni, one of the *Manushi* Buddhas. The Nigali Sagar pillar inscription of Emperor

Asoka mentions that *Devanampiya Piyadasi* (Asoka) enlarged the *stupa* of the Buddha Konakamana to twice its original size in his fourteenth reign year. When he visited the site again after his twentieth year of coronation he erected an inscribed pillar, specifically in honour of Konagamuni, the former Buddha. An inscription at Bharhut records him as Bhagvato Konigamena and he is represented in the form of a totemic tree, personal-Bodhi tree in sculptural art in the circular medallion of the ninth pillar in the southeastern quadrant. There are two epigraphical references to Kanakmuni in the Sannati area. One of these located at Sannati begins with an invocation to Lord Kanakmuni as *Jayati Bhagavam Kanakasa*. The other, situated at the stupa site itself, is engraved on a mutilated seated image of Lord Buddha and reads *Sidham bhagava samasabudho Konagamuni*. This type of Buddha is known as Konagamana and Konigamena by the southern Buddhists and as Kanakmuni and Konakamuni by the northern ones. The retention of letter *ga* in the toponym Kanaganahalli is crucial and the modern name of the village hence seems to be a derivative of Kanakmuni. Kanaganahalli was the north-eastern suburb of greater Sannati, and at the center of which the Satavahanas had their fortified township, identified as Ranamandala. It was surrounded by many *stupas* and monasteries at north, northeast and east respectively at Anegutti, Benagutti, Kanaganahalli and Hasargundgi (Poonacha 2011, 15).

Asoka had an important center of provincial administration, *Suvarnagiri* referred to in the minor Rock Edict-1 from where the *Aryaputra* addressed the *Dharmamahatras*. Archaeological artefacts such as Northern black polished ware, punch marked coins, stele bearing major and separate edicts found within the fortified township and its periphery clearly indicate that this center was Sannati (Poonacha 2011, 616). *Isila* and *Suvarnagiri* are the only two place names which

are known so far from the Asokan edicts in the Karnataka-Andhra region. *Suvamnagiri* (Suvarnagiri) could possibly refer to the environs of Maski in Koppal district where the edict has been found. Suvarnagiri has been identified with Kanagagiri, district Koppal; Sonagir in Bihar, Songiri in Maharashtra, somewhere near Rajgir; Erragudi in Andhra Pradesh and in Sri Lanka. The discovery of the separate and major Rock Edicts, Northern black polished ware, punch-marked coin in the Ranamadala area, the Mauryan phase of fort and *stupa* in the excavations may be regarded as valuable data to identify Suvarnagiri with Sannati. *Suvarnagiri* has been regarded as the capital of the Southern province of the Mauryan empire and it has been suggested that *Isila* was perhaps a district headquarter under the jurisdiction of *Suvarnagiri*. *Suvarnagiri* has been variously identified with several place names and in the opinion of Prof K.P. Poonacha, *Suvarnagiri* must have been same as Sannati (Poonacha 2011, 620).

5.3 Chronology

Sannati was dated to second-third centuries CE on the basis of explored data. Debala Mitra maintained that it was a flourishing Buddhist center between first century BC to third century CE (Poonacha 2011, 161).

5.4 Location and immediate surroundings

Sannati (Lat. 16°49'40"N; Long. 76°54'30"E) was discovered in 1954. It is located on river Bhima which is a tributary of the Krishna. Bhima originates in the Western Ghats at Bhimashankara in Maharashtra. It enters Karnataka at village Sesgeri (district Belgaum). Bhima finds mention in the Matsya, Brahma and Vamana puranas as well as in the Mahabharata. At the place where the river

originates, the well known Jyotirlinga Bhimashankara is located and consequently it is known as Mahanadi also. At Sannati Bhima takes a northerly course, *uttaravahini*, and thus gets sanctified (Poonacha:2011,1).

The entire region is semi-arid with little vegetal coverage, chiefly of dry deciduous type. The soil found is black cotton soil. Due to its property of retaining water the agricultural operations are conducted even after the rains have stopped. Its physical property of alternate shrinking and swelling causing sufficient air to traverse in its formation makes it a more desired soil formation for agricultural operations. It is also rich in potassium and calcium which are suitable for the cultivation of cotton. The climate is characterized by dryness with a long severe summer. The annual average rainfall is around 700 mm. Southwest monsoon is from July to September. September is the rainiest month. May is the hottest month with a mean daily maximum temperature of 46° C and the minimum is 14° C in December (Poonacha 2011, 6).

5.4.1 Chandralamba temple - Temple dedicated to Goddess Chandralamba (Chandala/Chandrala/Parameshwari) a sakta goddess is situated at Sannati. The Goddess Chandralamba is said to represent the unified concept of Mahakali, Mahalakshmi and Saraswati. They are considered to be the feminine counterparts of Siva, Vishnu and Brahma respectively (the *Traipurashas*) (Poonacha 2011, 1). Based on the present form and style and a sanctum resembling a *Srichakra* it seems to be a late medieval structure. The temple is dated to the Chalukya-Rashtrakuta period (Poonacha 2011, 4).

5.5 Physical layout

5.5.1 Mineral wealth - Evidence of ancient mines of gold and copper are reported from the closeby Shorapur taluk as at Manglur and Makangavi. Quartz, agate,

cherts of varied colour, crystals of tourmaline in pegmatite veins and gypsum are found in the district. Large deposits of limestone constitute the chief mineral wealth of the place. At Sannati the river Bhima meanders and takes a short straight north-south course thereby making the area suitable for habitation particularly on the left bank as indicated by the material assemblage. River Bhima receives many rain-fed seasonal and perennial rivulets such as Sirwal halla, Biral Halla, Kollur Halla, Kagna, etc. (Poonacha 2011, 5).

5.5.2 Flora and fauna - The popular wood-yielding trees which are native to the area are Satin, Tirman, Siris, Narlinga, Amaltas, Chanangi, Gumpana, Andak, Nallamadi, Ermaddi, Ebony, Mohwa, Tada, Halda, Bhilawa, Tari, Sundara, Billphal, Gumartek, Sandal, Chironji and Somi (Poonacha 2011, 6-7). Animals found include Wild dogs, Wolves, Panthers, Bears, Hyena, Spotted Deer, Sambar, Black buck, Indian Fox, Jackal, Wild hog, Porcupine, Mongoose, Langur, Rabbit, Monitor Lizard, Krait, Russel viper, Pit viper, Cobra, Scorpion. Birds noted in this region are Parrot, Mynah, Dove, Woodpecker, Peacock, Owl, Eagle, Humming Bird (Poonacha 2011, 7).

5.6 Exploration and excavation work at Sannati and in the adjoining area

The ancient remains at Sannati were identified by Kapatral Krishna Rao in 1954. Early exploratory work was done by M.Seshadri and S. Nagaraju. They found more than one hundred sculptures. P.B. Desai undertook exploration at Sannati in 1968 and claimed that Sannati could be “the biggest Buddhist center in Karnataka”. M.S. Nagaraja Rao came across remains of *stupas* at various places in Sannati (Poonacha 2011, 7). A.Sundara undertook trial excavation in 1986-87 at the citadel area known as *Ranamandala* at Sannati village. The excavation brought to light a rectangular brick structure with many small rooms built in typical size

bricks (40 x 30 x 7 cm and 39 x 20 x 6.5 cm) along with early historic antiquities of the Satavahana period (Poonacha 2011, 8).

In 1986-87 J.R. Howell of Society for South Asian Studies excavated at Anegutti, a *stupa* mound at Sannati, in collaboration with the Archaeological Survey of India. The excavation in the stupa mound with a height of 8.50 m and a maximum diameter of 70.00 m revealed that the stupa had been built in layers of locally available shale alternating with black cotton soil deposits mixed with lime stone chips with peripheral veneering in bricks. At the core of the mound, at the apex, a deposit of pure shale was recorded. The stupa had peripheral brick structures in the northwest and in the south (Poonacha 2011, 8).

A tile production area was discovered on the river bank. An interesting discovery was that of two bathing ghats located on the banks of river Bhima (Fig.5.2). The most predominant pottery type found in the course of excavation is the red ware. The red ware can be sub-divided into coarse red ware, slipped red ware and burnished red ware. The coarse red ware is available in utilitarian forms, including cooking vessels and storage jars. Some of the other shapes available in this ware are small globular vessel, small goblet, deep bowl, shallow bowl, shallow dish, vase, lid, spout, etc. The slipped red ware is found in the same form as the coarse red ware. These include bowl, deep bowl, shallow dish, cooking vessel, vase, basin, large storage jar, large storage vase, lid, etc. Burnished red ware is available as dish, shallow bowl, cooking vessel, basin, vase, storage jar. Other pottery types comprise of red polished ware, black and red ware and black ware. The red polished ware and the black ware were available in lower proportion as compared to other types of pottery. The main shapes found in red polished ware are vase, sprinkler. The black and red ware is more common than the red polished ware. The principal shape available in black and red ware is dish. The black ware is represented in dish and vase (Howell 1995; 30-32, 34, 36, 40, 42-43). A total of

seventy-nine coins (Fig.5.3) were collected from Sannati. Seventy-four coins belong to the early historic period and five coins can be attributed to the medieval period. A total of fifty-nine coins of lead, one silver and fourteen copper alloy coins were recovered. The lead coins are either circular, oval or irregular in shape ranging in weight from one to ten grams. The copper alloy coins are square, rectangular and circular in shape weighing one to four grams. The three arched hill symbol is found on the obverse of majority of coins. The symbol can be crescented, have a plain or chisel base and can overlie a horizontal or wavy line. The legend around the periphery is normally in an anti-clockwise direction but is sometimes clockwise. Other symbols that appear on the obverse are animal figures such as bull, lion or elephant. The reverse has Ujjain symbol which is variable. It can be crescented, have single or double circles and have pellets at the centre of the orbs. The coins found can be attributed to Satakarni 1, Satakarni 2, Pulumavi 1, Vasisthiputra Pulumavi or Vasisthiputra Siva Siri Pulumavi king Satavahana and Gautamiputra Satakarni or Vasisthiputra Satakarni. The coins of Satakarni 1 have been recovered from Kondapur, Kotilingala, Nevasa and Bhokardan. These sites belong to the Mulaka, Asika and Asmaka region. Sannati was located in Asmaka. Satakarni 2 was the most powerful Satavahana king who ruled for fifty-six years and issued coins. The power and prestige of the Satavahanas grew under him. He added Gujarat and Saurashtra region to the Satavahana empire. According to Vayu Purana Pulumavi 1 ruled for twenty-four years (Howell 1995; 44-45, 56-57). A large number of sculptures were collected in the course of exploration. Most of the sculptures are memorial slabs. The slabs are approximately 0.60 m in width and 0.10-0.20 m in thickness, with varying height. The slabs are divided into a series of panels. The top panel is arched and decorated with a series of tiered roofs with chaitya arched windows. In some sculptures human figures can be seen in these windows. In some of the sculptures, a portrait of an individual or couple has been

represented. The central figures are normally accompanied by attendants. Occasionally, a label inscription is included either above or below the panel. An unyoked bullock cart has been portrayed. The sculptures are most likely Buddhist in origin and have been interpreted variously as meaning great departure of Lord Buddha, end of a journey, etc. (Howell 1995,69). A total of seventeen inscriptions were collected during 1986-89 excavations. Most of these inscriptions are label and have been executed on limestone memorial stones. The inscriptions are normally found on sculptured panels though a few are found on plain slabs also. They can be dated between first century and third century CE. The inscriptions are either commemorative or donative in nature and issued by kings, royal officials, merchants and others (Howell 1995, 81). The most common type of bangle found is made of shell, along with terracotta and glass. The shell bangles are extremely plain, square or rectangular in section with occasional rounding or chamfering of the edges. The glass bangles are generally circular in section and are blue, green and yellow in colour. Two terracotta bangles were recovered. The first bangle is spiralled whereas the second is fluted (Fig.5.4). A total of twenty-two rings including ring fragments were collected. The rings are of two main types, complete rings which are probably finger rings and open ended copper alloy rings which could be toe rings (Fig.5.5). Rings are made of shell, carnelian, copper alloy. Three ear studs made of stone, shell and lead/tin alloy were recorded. Two hundred and eighteen beads in eleven materials were collected (Fig.5.6, 5.7). The different materials used in making beads are shell, agate or carnelian, glass, jasper, lapis lazuli, amethyst, rock crystal, bone, clay and terracotta. Three kohl applicators were found. Four copper alloy artefacts were recovered. Another four fragments of thin copper alloy sheet came to light. Five cast copper alloy discs were noted (Fig.5.8). They had crescented three arched hill symbol punched on them. Sannati has given evidence for a flourishing terracotta figurine industry,

comprising both human and animal representations (Fig.5.9)). Most of these are made of double moulded variety. Explorations in the raised inner citadel i.e., the Ranamandala area gave evidence for several terracottas which included ten heads with elaborate hairstyles, seven feet and six other body fragments. Two terracottas were collected which were not made from the double moulding technique. A torso of mother goddess figure with broad hips and crude arms was recorded. The head and extremities of the limbs are broken. The second terracotta is a plaque with a semi-circular top. In relief on the front of the plaque is the head and body of a male figure. The facial features are not clear. Two fragments of terracotta wheels were noted. These could be toys. A tablet with seven parallel rows of indentation on each side were collected. During excavation thirty-one fragments of iron nails were collected. A long sewing needle with an eye, measuring 95 mm in length and an iron spear or arrow head, 78 mm in length were collected along with many identifiable iron objects (Howell 1995; 85-86,88). The site has given evidence for early historic pottery which includes black and red ware, black ware and red ware of coarse, slipped and polished variety besides polished red deluxe ware. Inscribed and uninscribed coins of lead, copper and potin of Sri Satavahana, Sri Satakarni and Vasisthiputra Siva Sri Pulumavi have been collected along with a punch marked coin. The site has given information for mutilated memorial sculptures (*Chayapratimas*) both inscribed and uninscribed. Terracotta figurines, beads of different materials, bangles and other minor antiquities were collected (Poonacha 2011, 8).

The Department of Archaeology and Museums, Government of Karnataka worked in the *Ranamandala* locality at Sannati during 1993-95 in the central part of the mound and brought to light structures typical of a habitational deposit and reached the chronology of first century BC to third-fourth centuries CE. The ceramics recorded were Northern black polished ware) Rouletted ware, red polished ware,

inscribed pottery, moulded decorated pottery, fragmentary Russet coated painted ware (Poonacha 2011,8). Shallow dishes with flat bottom slightly convex sides and flattened edge in red ware are commonly found. The types and fabrics are comparable with the pottery of the early historic period found at Maski, Chandravalli and Brahmagiri in Karnataka and Nagarjunakonda, Veerapuram, Vaddamanu in Andhra Pradesh. NBPW (Fig.5.10) and two sherds of Russet coated white painted ware (Fig.5.11) were recorded. A few potsherds of Rouletted ware (Fig.5.12) were recovered. Rouletted ware found here resembles the types found at Amaravati, Veerapuram, Salihundam, Vaddamanu, Arikamedu, etc. The Rouletted ware is found in black sherds of fine fabric with the section made with well levigated clay. It is interesting that a large number of inscribed potsherds came to light (Fig.5.13). They are fragmentary in nature with incomplete inscriptions. These are burnished red wares available in shapes such as vases, dishes, bowl with Brahmi inscriptions reading “Ma”, “Kamsa”. The sculptures of Sannati are comparable in style with the early sculptures of Goli, Bhattiprolu, Amaravati and Nagarjunakonda. Sculptures recovered included female figure, a male head, lajja gauri (Fig.5.14) and the lower part of a seated male figure, identified as Kubera. The Buddha has been represented in symbolic forms. Other sculptures include donor couples, memorial stones and Ayaka pillars. Themes from Jataka tales also find representation. The sculptures have stylistic affinities with those of Amravati and Nagarjunakonda. A terracotta Lajja-gauri was collected. The tablet shows a nude goddess. The legs are shown apart and wide and the body is depicted in *Purnaghata (Kumbha)* form, which is regarded as the symbol of fertility. Terracotta remains also include Yakshas (Fig.5.15), male and female heads, Mahisa-mardini, horse, ram, elephant, etc. Beads (Fig.5.16-5.21) of different raw materials such as jasper, carnelian, lapislazuli and terracotta were collected. These beads were also available at Maski, T.Narasipur, Chandravalli and

Brahmagiri in Karnataka and Kondapur, Nagarjunakonda, Veerapuram, Vaddamanu in Andhra Pradesh. Further, ivory shell bangles (Fig.5.22), kohl sticks (Fig.5.23), hair pins, crystal objects, copper rings, iron and copper bowls (Fig.5.24), iron implements such as knives (Fig.5.25), punch-marked coins (Fig.5.26), Satavahana coins (Fig.5.27), terracotta human heads (Fig.5.28) were recorded in the course of excavation. An interesting discovery was that of a granary (Fig.5.29). Roman clay pendant was collected (Fig. 5.30-5.31) (Devaraj and Talwar 1996; 9-10, 13, 15). A fragment of a miniature votive stupa made on ivory, an exquisitely carved stone disc showing three bare female figures alternating with animals such as horse, lion, elephant, stag, birds and floral designs similar to discs noted at Vaishali, Sankisa and other sites are noteworthy. Roman clay pendant showing the bust of emperor Tiberius, coins issued by Satavahana rulers and various kinds of beads made on semi-precious stones and terracotta are important finds (Poonacha 2011,8).

At Hasargundgi was found a low mound with early historic assemblage. The mound rises to a height of nearly 2 m and measures 50x50 m. The site is located on the right bank of the Sirwal halla, a rivulet. In the course of exploration black and red ware, red ware and a few decorated friezes of railing along with a sculpture of Yaksha were found. Brickbats, uprights with fortices, fragments of octagonal shafts and pillar bases made of limestone clearly indicate that there was a brick built *stupa* and railing at the site (Poonacha 2011;11,13).

Spread over an area of approximately 80 hectares on the left bank of the river Bhima, *Ranamandala* area of Sannati has shown evidence from pre-historic to early historic period. A trial trench of 25 sq m was laid in the apex of 6.50 m high mound. The vertical investigation showed a stratigraphy of eleven layers. There is evidence for period 4 which is the Satavahana period (strata 2-4). The cultural deposit in this strata measures 2.70 m in thickness. Antiquities found include red

ware, polished red ware, stamped pottery, black slipped ware, Russet coated white painted ware, Rouletted ware, beads on terracotta, semi-precious stone, shell objects, polished pounders, mullers, etc. Coins of copper, lead and potin belonging to Satakarni and Sri Satakarni have been found. Extensive brick structural activity has come to light. Period 3-B is regarded as the Maurya-Satavahana phase (strata 5). On an average, the cultural deposit in this strata measures 65 cm in thickness. Material assemblage recorded is red ware, polished red ware, black slipped ware, beads on terracotta, semi-precious stone, shell objects, polished pounders, mullers, etc. and coin of Maharathi Siri Satavahana. There is evidence for the beginning of structural activity. Period 3-A is considered to be the Mauryan period (strata 6). The cultural deposit in this strata measures 85 cm in thickness. Artefacts found were red ware, black polished ware, black and red ware, scrubbers, polished stone pestles, dumbell shaped pounders, stone block and other objects such as shell bangles, beads on terracotta and semi-precious stones, bone arrow-heads and coins. Period 2-B (strata 7 is divided in two levels 7 B and 7 A) has given evidence for Mauyran and Megalithic period. On an average, the cultural deposit in this strata measures 20 cm in thickness. Antiquities for the megalithic period are red ware, black ware, black and red ware, slag, nails, fish-hook of iron. Period 2-A (strata 8) has given evidence for the megalithic period. On an average, the cultural deposit in this strata measures 50 cm in thickness. The assemblage found included black and red ware and stray iron implements (Poonacha 2011, 16-17).

The massive fortification wall (Fig.5.32) spread over 2 km covers an area of approximately 80 hectares in a semi-elliptical form. The wall is nearly 12-13 m wide at the base and 4-4.5 m at the top and has an average height of 6.5 m on the outer side and 3-4 m on the inner side. The fortification has three entrances perhaps with bastions respectively connecting to the Benagutti area in the north, the *stupa* at Anegutti on the north-northeast and the Chandralamba temple and

thence to the *stupa* site at Kanaganahalli on the northeast-east. Locally, the fortification is known as *Seturajana kotte*. According to K.V.Ramesh it is a corrupt form of *Satavahana Kote* (fortress of Satavahanas) at par with Satani Kota. In the opinion of I.K. Sarma it was named after the king Setu (Seturaja) who attempted to dishonor Chandralamba and died due to her curse (Poonacha 2011, 18). A trial trench measuring 10 x 5 m in the east-west axis was laid across the north-eastern arm of the fortification close to the eastern gateway running in north-south direction. In the course of excavation terracotta human head was found. It has characteristic Satavahana features. The ceramics recovered included red ware, solitary stamped sherd and red polished ware of Satavahana period (Poonacha 2011;18, 21).

Hasargundgi (Lat. 16°48'42"; Long. 76°54'43") is situated 3.5 km east-southeast of Chandralamba temple on the right bank of the river Bhima. A trial digging yielded brickbats and decorated sculptures of suchi, stambha and Yaksha. Excavation in an area of 625 sq m covering the entire mound revealed the complete plan of a very disturbed circular brick *stupa* with *ayaka* platforms. These were surrounded by a limestone railing with uprights and crossbars. The available base portion of the *stupa*, circular on plan, measures 13.7 m in diameter and is constructed with burnt bricks measuring 7.5-8.5 x 2.7 x 5.1 cm in size. The similarity in bricks and their mode of construction clearly show that it was a single phase construction. The foundation was prepared in naturally available rectangular limestone pebbles laid on edge in the plan over the black cotton soil and grounded to form a solid base upon which rises the brick courses. The present maximum height of the drum is 90 cm in 11 courses and the exterior surface was lime plastered. The *stupa* built in northeast-southwest direction has rectangular *ayaka* platforms with dimensions 1 x 1.6 x 1 m abutting the drum at cardinal directions. Small limestone slabs recorded on the *ayaka* platforms were perhaps used as base-

cushion to the pillars. The ayaka pillars had a coping member. A circumambulatory passage of 2.85 m width with evidence for lime plaster is found around the stupa. The stupa was surrounded by a limestone railing as indicated by uprights with mortices and cross bars. Both uprights and crossbars are embellished on the exterior with prominent lotus medallions, the maximum being 32.5 cm in diameter. Decorated animal friezes acting as ushnisha over the railing were found. The rectangular panels have decorated borders depicting animals such as elephants, bull, boar, tiger and galloping antelope. A few coins of Pulumavi were recovered from the pradakshinapatha levels (Poonacha 2011,21-22).

Kanaganahalli (Lat. 16°51'10" N; Long. 76°56'20" E) is a small hamlet about 5 km due east of Sannati village on the left bank of river Bhima, taluk Chitapura, district Gulbarga. In the course of exploration by the Archaeological Survey of India, Bangalore Circle in 1991, remains of a stupa, sculptures and inscriptions of early historic period were found besides dull red ware. A trial excavation was undertaken by the Archaeological Survey of India, Bangalore Circle in 1994-95. It revealed a plan of one-eighth of a large stupa of Hinayana phase, built using locally available limestone. The other structural remains found included parts of pradakshinapatha, portion of lower drum veneered with decorated limestone members showing Dharma Chakra, Jetavana, Vajrasana, etc. (Poonacha 2011;22, 25).

5.7 Stupa

5.7.1 Excavation at Stupa Mound at Kanaganahalli - The mound is spread over 97-100 m and rises to a height of approximately 2.30 m in a circular configuration (Poonacha 2011, 41). Remains of a pillared mandapa or a promenade associated with the stupa were recorded (Poonacha 2011, 43). A total of 36 trenches of 10 m

x 10 m were laid in the grid pattern following the contour and circular configuration of the mound. Excavation brought to light remains of a highly decorated and disturbed *stupa* (Fig.5.33) with rectangular platforms (*ayaka-vedikas*) at cardinal directions surrounded by a sculptured railing made of uprights (*tabhas*), crossbars (*suchis*) and coping members (*ushnishas*) with entrances in the cardinal directions with moon-stone (*chandrasila*) and an entrance sill as the main architectural composition. In the peripheral area of this structure ten associated brick-built structures of varying dimensions and plans clearly aligned around the *stupa* were noted (Poonacha 2011, 43). Excavation resulted in the discovery of dome, drum, stumps of vertical posts (*tabhas*) of limestone (*in situ*) with lateral mortices, cross bars (*suchis*) of lenticular section. Minute sherds of rolled and weathered red ware have been collected (Poonacha 2011;46, 47). Lead and potin coins of Satavahana rulers were found (Poonacha 2011, 47). A much-disturbed structure of the mahachaitya (*stupa*) was found. It is surrounded by ten small and big brick and limestone veneered votive stupas, square platforms for the worship of *Buddhapadas* and a big brick-built monastery, rectangular on plan, along the northern periphery of the complex. The main *stupa* is oriented at about 15° northwest from the true north-south axis. The present damaged *stupa* built in limestone rises to a height of nearly 3 m and has a completely disturbed dome, part of upper drum with its massive sculptured veneering supported by collars at base, an upper non-functional circumambulatory passage, a base (*vedika*), a 3.25 m wide circumambulatory passage, all of which is surrounded by a 2.50 m tall railing marked with entrances at north, south, east and west. There is a door sill and moonstone (*chandrasila*) at the entrance. Four disturbed *ayaka* platforms abutting the lower drum, at cardinal directions opposite to the entrance have been located. An important find is that of colossal statues of standing Buddha on separate pedestals veneered with cornices along the periphery with sculptured friezes

showing the great events in the life of Buddha. These are located on the southern and western *ayaka* platforms. Eight Manushi Buddhas have been recorded over the circumambulatory passage against unsculpted lower drum panels in the intra-cardinal directions of the stupa. One seated Buddha sculpture was placed on the eastern *ayaka* platform besides the four *ayaka* pillars kept on it (Poonacha 2011, 51).

Image of Yaksha was found outside the railing to the left of moonstone at north, south and west. The bowls of offering, cut in stone and perhaps placed over the head of the Yaksha images (*pushpavahakas*) could be located nearby. There is evidence for a pillared rectangular alignment. The structure has only six pillar stumps *in situ*. Traces of limestone paving between the pillars have been identified. According to the excavator, the structure seems to have been a promenade and perhaps accommodated more than ten pillars (Poonacha 2011, 53). The builders of stupa and associated structures have utilized the locally available limestone and brick and used lime mortar/lime concrete (Poonacha 2011, 54).

The extant stupa measures approximately 26 m in diameter and 94.30 m at the railings, 74.35 m at the lower drum and about 68.14 m at the upper drum, in circumference respectively and almost 17 m in height (Poonacha 2011, 65-66). Around the lower drum a 3.75 m wide circumambulatory passage is given. This passage is enclosed by a decorated railing of 1.95 m in height above the ground and the exterior face of each railing is made of four lotus medallions and probably crowned by an *ushnisha* as indicated by the tenons on the top of railings. Each railing is held by four cross bars adorned with lotus medallions. In between the distal uprights of the railing an entrance sill decorated with lotus medallions is provided which is preceded by a semi-circular moonstone. The sculptures of Yaksha with flower-bowls (*pushpavahaka*) are found close to the entrances except

for the eastern entrance. Shallow stone-cut squarish and circular bowls for offering were located at the western and southern entrances (Poonacha 2011, 65).

The *ayaka* platforms seem to have been introduced by extending the brick veneering by a meter in the four cardinal directions as part of the second phase of constructional activity of the stupa (Poonacha 2011, 66). As the platforms face the entrances to the stupa complex, it is expected that the most significant events of the life of Buddha are executed in the sculptured cornices resting on the veneering of the *ayaka* platforms. The aim appears to familiarise the common people with the life of the Buddha through these narrative panels. In period 2, in the course of different phases of construction, besides placing the *Buddhapadas* over the pedestals on the platforms, ornate *Buddhapadas* were also placed behind the sculptures. On the eastern platform, the four pillars symbolically representing the episodes from Buddha's life (birth, renunciation, enlightenment, first sermon and the great departure) were installed over the platform. The fifth central pillar was represented by the statue itself (Poonacha 2011, 66-67).

The extant northern *ayaka* platform in its disturbed state measures 3.45x1.60x1.46 m. The decorated slab facing north occupies the right side corner of the *ayaka* and depicts *Siri* (Sri or yakshi), the guardian goddess of north and of wealth. The veneering panel *in situ* at the western corner, facing north, symbolically shows the first sermon of the Lord to his disciples in the deer park at Sarnath. Buddha is symbolically portrayed in the form of a throne (*simhasana*) with footprints over the seat, a deer on each side of the throne and a *dharmachakra* in the backdrop (Poonacha 2011, 67-68). Fragments of carved architectural members of veneering slabs and *Buddhapada* were retrieved. One of the pieces of *Buddhapada* was engraved with the name *Bodhika* who may have been the donor of the slab (Poonacha 2011, 68). The *ayaka* platforms are embellished atop with a cornice of

sculptural friezes narrating the life of the master. Three horizontal blocks were found exhibiting a total of nine scenes, sculpted on the front face. The scenes shown are the following – 1) dream of Mayadevi 2) interpretation of the dream at the royal court 3) birth of Siddhartha 4) baby Siddhartha being brought to Kapilavastu from Lumbinivana 5) baby being presented to Sakyavardhana, the tree spirit 6) the great departure 7) carrying of the crest relic by the celestials 8) enlightenment 9) the preaching (Poonacha 2011, 71).

The eastern *ayaka* platform measures 3.60x1.25x1.20 m and encompassed four huge octagonal square based *ayaka* pillars symbolizing four of the five major events in the life of the Buddha. This is the only platform which has the evidence of *ayaka* pillars inserted into it (Poonacha 2011, 71). The *ayaka* pillars with square cross-section (40x40cm) were positioned on the *ayaka* platform at an inter-space of nearly 40 cm supported by bricks and boulders at the base. The eastern face of one of the pillars shows a multi-branched *bodhi* tree emerging from a double railing of considerable height. On either side of the railing, couchant deer facing the railing are executed. The frontal face of the octagonal shaft has an eleven-lined Brahmi inscription describing the donations made by a person from *Dhanyakataka* (Amaravati) for the installation of the *ayaka* upright and umbrella. The eastern face of yet another pillar depicts worship of *dharmachakra* by devotees on either side, representing the first sermon (Poonacha 2011, 72). There is a clear execution of an ornate stupa with a relief of relic casket on the drum portion of one of the pillars. The execution of ornate *stupa-chaitya* or relic shrine with reliquary may have symbolized the *Mahaparinirvana* of Buddha. The *ayaka* was provided with sculptured cornices with narrative friezes placed at the periphery around the Buddha statue conveying the life story of the Buddha (Poonacha 2011,74). The seven scenes shown are 1) Buddha in the harem at the time of departure 2) return

of Kanthaka and the grief stricken parents of prince Siddhartha 3) *Chuddharana* of the Lord 4) Buddha's sermon to the Sakya's 5) *Chuddharana* 6) Jetavana episode 7) the *mahaparinirvana* (Poonacha 2011,74-75).

The southern *ayaka* platform had a massive sculpture of standing Buddha placed over an ornate pedestal designed in the form of a fully blown lotus. The enlarged brick built platform of southern *ayaka* was also veneered with limestone slabs. Three ornate slabs decorated the southern face and non ornate slabs were found at east and west sides respectively. The southern face shows a three-storied *vriksha-chaitya* raised over six octagonal pillars with a railing (Poonacha 2011, 75). The pilaster border along the left shows a lion capital with couchant deer. The pilaster on the right side has a relief of Nagini at the center of the shaft portion. The base of an ornate *dharmachakra* flanked by a couchant deer resting its snout on the left side was found. The *dharmachakra* has thirty two spokes with equal number of hubs, bordered by a plain broad rim the outer periphery of which has a series of outturned *triratnas* (Poonacha 2011, 76). There is an interesting execution of a stately Naga flywhisk (*chauri*) bearer. He holds his left hand akimbo, has raised the *chamara* in his right hand, wears squarish *kundalas* and a thin *nishka* type of *vaksha-hara*. Inscription above the head of the *chauri* bearer reads – *Nagaraya mahakala* (Serpent king Mahakala). There is another flywhisk bearer who is shown attired with a turban and a rectangular beaded ear ornament. His right hand holds the shaft of the *chamara* near the chest and the whisk rests on the right shoulder. There is a fragmentary record engraved over the head ...*yaksha sadagiro* (Yaksha Sadagira). An inscription of second century CE in Brahmi characters was found. It reads *Kagisa sabharyasa saputakasa sa (d) u (h) t (u) ya ch kama* (offering made by Kagi along with his wife, son and daughter (for the caring work) (Poonacha 2011, 76-77). The platform was decorated on all the three sides, with

cuboid cornice members each having three frames of narrative friezes, carved on the exterior face. The friezes exhibit six major events from the life of Buddha – *Sanjanana* (birth), baby Siddhatha being presented to Sakyavardhana, the tree spirit, *abhinigamana* or *mahaprasthanā*, enlightenment (*sambodhi*), *dharmachakra pravartana*, distribution of the relics and its procession on elephants (Poonacha 2011, 77).

At the center of the western *ayaka* platform, over the pedestal stood a colossal image of Buddha facing west, the broken right hand in the gesture of blessing (*abhaya*) and holding the *sanghati* in the left hand placed near the chest. In the front, close to the feet were kept the *Buddhapada*. The *ayaka* was veneered with five slabs, one each at south and north and three at west. The slab facing south, shows an ornate *stupa* with three hooded serpent under a parasol set within pilasters and four octagonal *ayaka* pillars above it. The slab facing west reveals pilaster along both sides and a well-decorated circular relic shrine rising in two tiers. The first tier has an entrance through which a pear shaped relic shrine with corrugated finial is seen. The *chaitya* window has the gable and drawn into a *triratna* pinnacle. The domical second tier is topped by a finial. The body of the superstructure derived in the form of *anda* is treated with floral garland designs arranged in a wavy pattern. Amongst the two pilasters flanking the *chaitya*, the right one depicts a low relief of Nagini at the shaft, in adoration facing right and a flying *gandharva* at the abacus holding a plate of flowers in the left hand as if showering flowers on the *chaitya*. The left pilaster at the shaft, has a low relief of the *vriksha-chaitya* with *simhasana* and a flying *gandharva* on the abacus, in a similar posture as at the right abacus (Poonacha 2011, 79-80). Central veneering slab of western *ayaka* depicts a coiled nine-hooded serpent king Muchilinda. This is perhaps the most imposing panel at Kanaganahalli *stupa*. The right pilaster

border of the panel at south has a sculpture of Nagini adoring with her upraised right hand and the one at north also has a Nagini in *anjali* which when flank the Muchilinda panel gives the impression of Nagini's worshipping the serpent king (Poonacha 2011,80).

The western *ayaka* is embellished with cornices having carved narrative panels in three cuboid blocks of stone resting on the veneering members. While the first and second cornice contain three narratives each, the third contains only the procession of elephants carrying the reliquary. The seven episodes narrated are 1) *Svapnadarsana* by Mayadevi 2) Asita interpreting the dream and forecasting 3) the pregnant queen being admired by the royalty 4) birth of Siddhartha at Lumbinivana 5) Mara's retreat or enlightenment 6) dharmachakra pravartana 7) distribution of the reliquary. The excavated stupa was richly decorated at the drum levels with sculptured slabs of limestone. The sculpted slabs exhibit *chaitya* worship, *dharmachakra* adoration, panels of Muchilinda Naga, *vriksha-chaitya*, *Naga-bandha-chaitya*, depictions of popular monasteries of contemporary times, episodes such as gift of Jetavana by Anathapindika to Lord Buddha and *stupas* with reliquaries (Poonacha 2011, 82). The narrow passage or ledge intervening the lower and upper drum also served as cornices above the lower drum. It is mentioned as *puphagahani* (*pushpagrahnika* or flower receptacle). These cornices serve a dual purpose of holding the top of the ornate/non-ornate *vedika* panles *in situ* and also function as pseudo-upper circumambulatory passage. The exterior face of cornice members (*pushpagrahis*) of 30 cm height is exquisitely ornamented with a frieze of railing pattern comprising of uprights and crossbars which are further embellished with minutely sculpted animals, birds and floral motifs set in a border of beaded garland at the top and rows of lotus buds intervened with galloping animals such as antelope, winged lion at the bottom, all tuned to the

notion of circumambulation to the Master or *Chaitya* in veneration. The frontal ridge of the cornice normally has donatory inscriptions (Poonacha 2011, 86). The median border of the upper drum (medhi) shows a row of geese with lotus stalks held in their beaks (*hamsa-pattika*). The pattern followed for narration on upper drum slabs is normally from the top of the panel to the bottom. It is the Buddha who got the main position in the narration of events whereas the other characters are equally distributed on either side of the central character. The male characters which appear in the panel are heavily draped at the lions and are bare-bodied above the waist. The female figures are heavily jewelled befitting their taste and social status and are shown wearing drapery around their lions with highly ornate *kati-bandhas* (Poonacha 2011, 89).

The themes depicted in the panels can be broadly classified into three categories 1) episodes narrating the events of the life of Buddha 2) select Jataka stories 3) portrait sculptures of Satavahana and other kings. Among the important events from the life of Buddha that find place are the conception of Mayadevi, delivery of baby Siddhartha, the great renunciation, the futile attempt of Mara (*Marabhago*), enlightenment symbolically shown in the form of worship of *simhasana*, *bodhi* tree in railing, *mahaparinirvana*, carrying of reliquaries in procession, etc. Jatakas which are executed in these panels include *Sutasoma*, *Vidurapandita*, *Suka*, *Hamsa*, *Mahakapi*, *Vessantara*, *Chhaddanta*, *Senakiya*, *Sajiniaya* and others. The Satavahana kings depicted are Chhimuka, Satakarni, Pulumavi, Matalaka, Sundara Satakarni (Fig.5.34-38). Mauryan emperor Asoka is also depicted (Fig.5.39-41). Most of these portraits are labeled. Other kings shown are Somarata, Kasiraja, Mandhata, Mahagovinda, Udayana, Arindama, etc. who were either contemporaries of Buddha or otherwise important. The upper drum is crowned by friezes of animals (Poonacha 2011, 89-90). The *harmika* had

an austere railing pattern. At the center of the *harmika*, the central shaft of the *chhatradanda* was buried and the three umbrellas (*chhatras*) were hoisted with the larger umbrellas at the bottom and the smaller disc at the top (Poonacha 2011, 95).

The width of the circumambulatory passage measures 3.25 m around the stupa and is constricted to 2.10 m at the *ayaka* platforms. Finely polished roughly rectangular limestone slabs of 6-8 cm thickness have been paved horizontally. Near the *ayaka* platform, rectangular or circular holes have been cut into the floor slabs for fixing wooden poles for garlanding and to decorate on specific occasions (Poonacha 2011, 96). Nearly ten seated images of Buddha were included in the stupa (Fig.5.42-43). Eight were located on the floor of the circumambulatory passage and one each was placed on the northern and eastern *ayaka* platforms. These sculptures were the exclusive contribution of sculptors and devotees belonging to *Vakataka Vishaya* as indicated by the inscriptions found on the pedestals. According to the inscriptions, these represent the eight *Manushi* Buddhas (Poonacha 2011, 97).

On the eastern side of the southern entrance, there was a standing figure of Yaksha holding a separate rectangular stone cut trough or the receptacle for the offerings of the devotees. The extant fragment shows the feet of a big figure of Yaksha and the lower ends of the *sanghati* of the lower and upper garments respectively fall on either side. The fingers and nails of the feet are clearly modeled. The upper part of the sculpture is not available. The stone receptacle found close by measured 34 cm in length, 44 cm in width and 25 cm in height and was most probably placed over the head of the Yaksha. On the top surface, a rectangular depression (32x25x11cm) is cut at the center with a uniform border of 5 cm width all along the periphery. It is a possibility that the depression was used to collect the offerings in the form of grains, flowers, coins, etc. which were made by the

devotees as they entered the stupa complex (Poonacha 2011, 99). Another Yaksha sculpture was discovered which measured 62 cm in length, 22 cm in thickness and 25 cm in height. The figure shows part of the potbelly, upraised left ankle and right foot only. The garment worn by the Yaksha is shown by way of horizontal strands with criss-cross designs and *yajnopavita* in the form of a thick chord. The left ankle is provided with a thick anklet in three strands having a series of tubular and spherical beads at the middle (Poonacha 2011, 100).

The stupa at Kanaganahalli was provided with a decorated railing 94 m in circumference. The railing pillars or uprights (*tabha*) stood to a height of 2.55 m. Each pillar was connected with four row of cross bars (*suchi*) and a decorated coping (*ushnisha*) 45 cm in height, resting on the pillars, along the outer periphery of the paved circumambulatory passage. In all there are 130 uprights (Poonacha 2011, 101). The four row cross bars (*suchi*) seems to be an important feature. The crossbars are made out of rectangular limestone slabs with elliptical cross-section so they could fit into the mortice. The central part has a circular projection to a maximum thickness of 15 cm. The exterior surface of the circular projection is decorated with a variety of floral designs. The lotus medallion over the central projection normally measures 30 cm in diameter. There are three to five rows of petals and a central stud. The stud is decorated but the inner surface is plain and used for engraving donatory label inscriptions (Poonacha 2011, 107-108). Thirty six donatory inscriptions were located on the uprights. The donations have been made by Satavahana Sramana of Utarahakona during the fifth reignal year of Vasisthiputra Siri Satakarni. The *Mahachaitya* at Kanaganahalli was hinayana in the beginning and later became a mahayana site (Poonacha 2011, 108).

Nearly ten brick and stone structures have been found surrounding the *Mahachaitya*. A large number of pilgrims, devotees and merchants travelled on

the trade route that connected Sannati to Paithan, capital of the Satavahanas and other Buddhist sites in the adjacent regions. In the inscriptions there is mention of visitors from Buddhist sites such as *Dhanyakataka* (Amaravati), *Kotura* (Kotur), *Kupana* (Koppal), *Isila* (Brahmagiri), etc. These visitors made grants for the maintenance and worship of the stupa, to the monks and nuns of the monastery and constructed subsidiary brick structures around the stupa, thereby making the *Maha stupa* a flourishing religious center. These structures showed different plans and possibly served as monastery, votive stupas and Buddha chaityas (Poonacha 2011, 109).

The monastic complex is situated towards the north of the stupa in which two wings have been identified. These have been termed as northwestern wing and northern wing. The northwestern wing is about 20 m from the *Maha stupa* and is built of brick and lime, measures 10.90 m in length and 6.20 m in breadth with its longer axis in east-west orientation. The northwestern wing of the monastery is composed of a verandah, two cells and a big hall which perhaps opened into five cells, built in north-east and south-west orientation (Poonacha 2011;109, 111). The northern wing of the monastic complex had a big hall and two cells built side-by-side for the monks. These cells together measure 6 m in length and 2.90 m in breadth respectively preceded by a common verandah measuring 6mx80 cm with an opening at the south. The bricks used measure 45x23x7 cm and are extant in one to three courses in elevation (Poonacha 2011, 111).

The *Maha stupa* is surrounded by peripheral structures. An apsidal brick structure is located to the south-southeast of the *Maha stupa*. The structure seems to have had on plan a rectangular entrance porch and an apsidal sanctum set in east-west orientation. It measures 6 m in length from the western apsidal end up to the entrance on the east and 5 m in width (Poonacha 2011, 113). The circular votive

stupa is located to the west-southwest of the *maha stupa*. The structure measures 6.12 m in diameter. The structure is extant to a height of 24 cm and was provided with an apron serving as circumambulatory passage. It is made of finely dressed limestone slabs of 14 cm thickness with a maximum width of 75 cm. The square brick shrine measuring 5.60 m located to the west of *Mahachaitya* is extant to a maximum height of 35 cm comprising five courses (Poonacha 2011, 115). The squarish structure is located to the northwest of the stupa. The available evidence and the remains of carved members indicate that it was built around a lofty pillar. This squarish platform measures 2.95 m, paved with finely dressed limestone slabs and bordered with roughly dressed rectangular slabs. At the center of the platform fragments of richly decorated pillar bases, capitals and decorated sockets are found strewn which seem to have originally formed part of elaborately decorated pillar of some importance. Mutilated abacus with adorned lions were retrieved from the vicinity of the platform. Within the platform, a *Buddhapada* and a stone votive stupa were accommodated in the north-south axis. In the vicinity of the structure, a comparatively well-preserved head of a human figure was found. It could be part of an abacus. It seems to resemble Yajna Sri Satakarni, as depicted on the silver portrait coins issued by him (Poonacha 2011;118, 120). A square pillared platform was located close to the uprights in the northwestern part of the *mahachaitya*. It measures 4.50 m and is extant to a total height of 70 cm. A square shrine (3.75x3.75m) located north of the northern *ayaka* platform was found (Poonacha 2011, 120). The circular votive stupa was constructed to the north-northeast of the northern *ayaka* platform. It has a maximum external diameter of 7 m with an entrance on the east. It is built of full and half size bricks arranged in concentric circles of double brick (Poonacha 2011, 122). Three square platforms of varying dimensions aligned in north-south axis at a distance of approximately 20 m to the east and northeast of the *Mahachaitya* were discovered (Poonacha 2011,124).

5.7.2 Additions and alterations in the Stupa - The original nucleus stupa of the Mauryan period in the form of a simple earthen tumuli was renovated, altered and embellished frequently during the Satavahana period. The girth of the stupa was expanded in the course of Satavahana period. The stupa was further encased with uniformly dressed limestone blocks with evidence for lime plaster. On the basis of inscriptions found at the stupa, these changes can be attributed to the sixteenth reign year of Chhimukh Satavahana when the sculpted encasements were donated by a householder Tokhisa. It is important to note that Chhimukh Satavahana has been depicted along with his friend Nagaraya (Poonacha 2011, 165). The upper drum was also embellished by introducing slabs bearing portraits of kings Satakarni, Matalaka, Sundara Satakarni and Vasisthiputra Pulumavi (Poonacha 2011, 167). As the Mahayana phase of Buddhism got underway, large sized sculptures of Buddha were introduced (Poonacha 2011, 169). The lotus was represented as the primordial symbol of purity. Further, the outer face of the *ushnisha* has sculptures of animals, both mythical and true. The animals have been executed as if they are galloping or chasing the animals in front. The mythical winged animals are mostly a lion who is representative of mobility and strength. The other animals depicted include the bull, boar, elephant, horse and double humped cattle (Poonacha 2011, 171).

5.8 Sculptures

The sculptural depictions of the *stupa* include Buddha worship in the form of ornate, non-ornate *stupa*, lion, horse, *vajrasana* with *pada*, *dharmachakra* in railing, *vriksha chaitya*, *buddhapada*, *triratna*, *jataka* tales of the previous birth

of Buddha and narratives from his life, all in the *hinayana* symbolic forms. An important subject which found place in stupa embellishment was the portrait of kings like Asoka, Udayana, Mandhata, Somarata, Mahagovinda, Chhimukha Satavahana, Satakarni, Matalaka, Sundara Satakarni and Pulumavi, etc. A notable theme depicted is that of Nagas and Naginis. Some of the interesting representations include Muchilinda Naga, Nagaraya Mahakala, Nagaraya Bhattaraka (Poonacha 2011, 173). Nagas (Fig.5.44) were the guardian deities of the cardinal directions. The artists have shown nagas independently as *chamaradharinis* and as devotees offering prayers either at the stupa or at the *dharmachakra*. Both reptilian and human forms with snake hoods have been executed, the snake hoods range from three, five and nine in number. The representation of *nagas* in human form can be seen at Bharhut, Sanchi and Amaravati (Poonacha 2011;188, 190). An important representation was that of Yakshi-Siri, identified with the Goddess of wealth, the consort of Kubera – the Yaksha of northern direction. This identification has been done on the basis of *srivatsa* mark on her abdomen. She is accompanied by an attendant and is richly ornamented (Poonacha 2011, 190-191). A sculpture of Yaksha, though highly mutilated has been found. He could be *Vairochana*, the tutelary Yaksh of Sannati. The extant torso and head of the Yaksha shows resemblance with the well known balustrade Yaksha of Pitalkhora (Poonacha 2011, 191).

Dharmachakra (Fig.5.45) depictions in Buddhist art symbolize the setting of wheel of righteousness by the enlightened in the deer park of Sarnath. It is one of the dominant subjects represented at the stupa (Poonacha 2011, 183). An important theme to be executed is the *stupa* and worship of relics. It further developed into the *stupa*-cult which made the worship of corporal relics enshrined in the *stupas* mandatory and an essential feature of early Buddhism in the form of *saririka*,

paribhogika and *auddesika stupas*. During Hinayana phase the stupas were the main objects of veneration. At Kanaganahalli stupa, different types of *stupas* are depicted on the lower and upper drum. The *stupa* representation included both ornate and non-ornate type (Poonacha 2011, 184). An interesting embellishment was the Ramagrama *stupa* which has been depicted twice in separate slabs and is shown worshipped by a Naga (Poonacha 2011;184, 186). In both the drum slabs, a king is shown worshipping. He could be Asoka. A somewhat similar depiction is available at Bharhut and Sanchi. The Ramagrama *stupa* has also been depicted at Amaravati (Poonacha 2011,186). The celestials have been represented as *dikpalakas*, *Sakra* (Indra), Nagas, Garuda and *Gandharvas*. They are shown as venerating the Buddha, seated on either sides of the *vajrasana* or descending from heaven to see the birth of Siddhartha, showering flowers on the sacred crown, on the path of the sacred elephant during its descent into the dream of Mahamaya, carrying the crown of the Lord in the heavenly flight, worshipping the master in the form of sacred Bodhi tree and *vajrasana* and celebrating the demise of the Lord by beating the celestial drum (*devadundubhi*). The celestials have been embellished with various kinds of ornaments like a headgear such as a turban, ear ornaments, necklaces and bracelets (Poonacha 2011, 198-199).

The royal personalities are portrayed with a lot of splendor. They are either standing or seated in the court or as a part of the procession accompanied by a large retinue. They are shown wearing decorated turbans with a varied central plumage. The nobility is represented as richly dressed and ornamented. The noblemen can be seen as riding tamed lion, elephant, horse and camel drawn chariots along with their entourage of *chhatra* and *chamara* bearers. Some of them are also accompanied by a group of drummers as announcers and water carriers. Women retinue bearers are portrayed as *chamaradharinis* for the royal

personalities. Female fan bearers can be seen by the side of or in between the queen and the king (Poonacha 2011, 199-200). The sculptural representations indicate that elephants, camels, and horses were the chief mode of transport for the kings, noblemen and elite traders. Sometimes Lion is depicted as a means of transport but this seems to be a matter of convention rather than as a real mode of transport. On one occasion the trader from Chedi named Murakasethi's entourage has a camel drawn chariot. The palanquin is executed as a pavilion of square and rectangular configuration with gable vaults and finials, as seen in the episodes of transportation of Mayadevi to her native place, the voyage of Murakasethi along with his grandson and the travel of Kasyapgotra (Poonacha 2011, 200). The common men to find a place in sculptural renderings are the servants attending the royal personalities and noblemen, as part of army, joyous people celebrating, caretaker of animals, characters in *jataka* tales, doorkeepers guarding the entrance with a *danda* or a club held in hand. The common folk are shown dressed in a non-ornate turban, without any ear ornaments, wearing a pair of bracelet and a long full arm tunic touching below the knee (Poonacha 2011, 202). Some of the other representations included Horse tenders, *Mahouts*, carriers of water and other essential materials, charioteers, usherers, etc. The army was represented as horse riders with a long spear, archers and foot soldiers (Poonacha 2011; 202-203, 208-209).

At the stupa site was found labeled portrait relief sculptures of royal personalities which included rulers of the Mahajanapada of Magadha, namely Mahagovinda and Udayana. Asoka has been represented twice. The Satavahana rulers who were shown at the stupa site comprised of Chimukha Satavahana, Satakarni, Matalaka and Sundara Satakarni. A sculpted head of Yajna Satakarni was found close to an accessory structure (Poonacha 2011, 292). The popularity of Asoka and his

contribution towards the spread of Buddhism in the region are duly acknowledged by the Satavahanas. He is also portrayed as making a futile attempt to retrieve relics from the *stupa* at Ramagrama and this attempt was strongly opposed by the Nagas. Further, Asoka is recorded at the *stupa* as despatching a mission to the Himalayan territories and sending his children Mahendra and Sanghamitra to Ceylon (Poonacha 2011, 293).

Buddhapadas (Fig.5.46) were a part of the *stupa* embellishment. This was in accordance with the sectarian principles of *hinayanaism* wherein his presence is indicated by a symbol. *Buddhapadas* are also worshipped independently where they are positioned over the *ayaka* platforms, temples and pavilions built separately in the *stupa* complex. There is evidence for independent shrines built to keep and worship *Buddhapadas* as indicated by the panel at Jaggayapeta and from Bavikonda. A platform for the worship of *Buddhapadas* was actually erected at Totlakonda. At Kanaganahalli twelve complete *Buddhapada* slabs were recorded and of these, nine were inscribed. The more ornate and inscribed *Buddhapadas* were placed over the *ayaka* platforms or on the flower receptacles (*pushpagrahinis*) before the installation of the images of Buddha (Poonacha 2011, 324). The *Buddhapadas* can be largely divided into two groups. The ornate and inscribed *Buddhapadas* which are positioned over the *ayaka* platforms and have been dated between first and second century CE while the non-ornate ones have been ascribed to mid-third century CE (Poonacha 2011, 325).

The Mahayana phase of Buddhism is reflected by the seated and standing Buddha sculptures in *Dharmachakra pravartana mudra*. Particularly notable are the two massive 2.40 m tall standing Buddha images over the southern and western *ayaka* platforms which also served as the main entrances from the river side and Sannati proper to the chaitya. The advent of Mahayana Buddhism and its canonical victory

over Hinayana resulted in the sculptural depiction of the Buddha either in standing or seated posture. Images of Buddha came to be produced around second century CE as the Mathura and Gandhara schools of art began sculpting such images (Poonacha 2011, 325). A total of ten seated sculptures of Buddha have been recovered from the excavations at the Maha Stupa complex. The seated sculptures of Buddha are located in the *pradakshinapatha*. The inscriptions on the pedestals indicate that these images were produced by artists from Vakataka Vishaya who belonged to the same family and same school of art. The Manushi Buddhas also appear in the Mathura school of art during the time of Huvishka, a contemporary of Yajna Sri Satakarni (Poonacha 2011, 328).

It is interesting to note that various types of early architecture was represented at the Mahastupa at Kanaganahalli. *Stupas* ranging from a simple hemispherical dome set on a plain drum to the ones set on multiple terraces with enclosed *prakaras*, multiple pillars, *chhatravallis*, etc. have been shown (Poonacha 2011;334, 336). Four types of *asanas*, used by both the royalty and noblemen have been depicted. These are *Vetrasanas*, *Paryankas*, *Simhasana* and *Vajrasana*. *Vetrasanas* were the cushioned circular seats with different size, shape and design. *Paryankas* were the low stools which could accommodate both the king and queen in the court either together or individually. *Simhasana* was a bucket type of cushioned chair of both single and double variety with or without back and armrests. A single representation is the throne of Chhimukha Satavahana. *Vajrasana* symbolized the presence of Buddha (Poonacha 2011; 336, 339). Animals are extensively executed as part of sculptural representations at the site of Mahastupa at Kanaganahalli (Fig.5.47). Similar examples can be seen at Bharhut, Jaggayapeta, Amaravati, Sanchi and Nagarjunakonda. Further, some of these depictions show common features with similar representations in the architectural

and sculptural ramification of other countries with which India had trade as well as cultural relations. The winged lion of Persia, centaur of Greece, human faced lion of sphinx, lions and chariots similar to the Assyrian examples hint at possible interaction (Poonacha 2011;339, 341). The winged lion is the most frequently shown animal who has several features betraying similarity with the Persian examples (Poonacha 2011, 341).

The depictions of the *Jataka* stories at Kanaganahalli range from monoscenic to polyscenic. The *Jatakas* of Hamsa, Suka, Nalapana (*Jatakam Jagarakhasa*) and Senaka are monoscenic and are narrated in a single register stressing upon the climax of the scene, like the idiom of Bharhut. The polyscenic depictions range from 4-6 scenes in equal number of registers. The depictions are usually related with Buddhist religion, contemporary life, art traditions, beliefs and practices (Poonacha 2011, 231). The *Jatakas* and other stories depicted include Velamiya, Vessantara, Hamsa and Suka, Chhaddanta, Jagarakha, Aridamiya, Mandhata, story of king Udayana, story of Devi Samivati, Senakiya and Kumara Arindama or Sonaka, Sudasomiya (Sutasoma) Sajiniya-preamble to Sutasoma, Vidura Pandita (Poonacha 2011, 232).

The *Jataka* stories are interspersed by panels showing historical happenings, events from the life of Buddha, portraits of royal personalities and other themes. The life of the Buddha from his birth upto his *mahaparinirvana* are executed in thirty two registers of sixteen panels on the upper drum. The sixteen panels include Gods beseeching Bodhisattva Sumedha to be born as Siddhartha, preparation of Mayadevi for the dream, descent of Bodhisattva as white elephant (*svetahasti*), and the dream, narration of the dream by Mayadevi and the prediction by Asita, Mayadevi proceeding to Devahrada and birth of the Master at Lumbini, celebration of the birth, Asita's visit to the sacred apartment in the palace and presentation of

the child to Sakyavardhana – the tree spirit (Yaksha), transportation of the crest relic, Naga king Kalika paying homage to meditating Siddhartha and Sujata offering milk rice, Mara's attack, Sakyas paying homage to the enlightened at Kapilavastu, worship of Vajrasana and Khalatika hills, siege of Kusinagara for relics, division of relics and transportation of relics (Poonacha 2011, 262).

The sculptural art at Kanaganahalli, Sannati shows a pronounced influence of the developments at Bharhut, Ajanta and Sanchi in the first phase of Satavahana period, indicating the socio-religious and cultural contacts that Sannati had with the respective places, perhaps as an off-shoot of a well-established trade line (Poonacha 2011,620). Some of the artistic traits and stylistic features percolated from centers such as Pitalkhora, Karle, Bhaja, Bedsa and from distant places like Bharhut and Sanchi. It was also influenced by Dhanyakataka (Amaravati) as indicated by the gifts given by people of that state (Poonacha 2011, 161).

5.9 Inscriptions

5.9.1 Work done on inscriptions - The inscriptions of Sannati were first noticed and published by M.Seshaadri in 1965. G.S.Gai published several inscriptions of fragmentary nature dating from around second century CE. I.K.Sarma and J.V.P Rao collated all the epigraphs in their work *Early Brahmi Inscriptions*. J.R.Howell published 17 fragmentary records retrieved from the excavations at the stupa mound at Anegutti and explorations in and around Sannati. Excavations at the Vihara complex at Benagutti has yielded a few fragmentary records datable to second-third century CE. In the inscriptions found there is reference to imperial Satavahana kings Sri Satakarni, Vasisthiputra Siri Satakarni and Vasisthiputra Siva Siri Pulumavi. There is also mention of Mahasatavahana Agnisarma, a provincial ruler (Poonacha 2011, 437).

5.9.2 Mauryan inscriptions – A rectangular granite stele with parts of Major Rock Edicts (12 and 14) and Separate Rock Edicts (1 and 2) (Fig.5.48) issued by the Mauryan emperor Asoka were discovered in the Devi (Kalikamba) shrine of the Chandralamba temple complex. This discovery took back the antiquity of Sannati region to the Mauryan period. Based on the evidence it might be inferred that Sannati was included in the Mauryan *vijita* almost around the same time when Asoka conquered Kalinga, after defeating the rulers of Sannati (Poonacha 2011, 437).

5.9.3 Date, script and language of inscriptions – Inscriptions found at Sannati palaeographically can be dated from third century BC to second-third century CE. They are in Brahmi characters of varying features and Prakrit language (Poonacha 2011, 437).

5.9.4 Inscriptions from the excavated Maha Stupa, Kanaganahalli –

5.9.4.1 Number, language and script - 270 inscriptions written in Brahmi script and Prakrit language were discovered ranging from a five-lettered donatory label inscription to an eleven-line epigraph (Poonacha 2011, 438).

5.9.4.2 Location of inscriptions – The inscriptions at Kanaganahalli are found located on various architectural members of the stupa and accessory structures (Poonacha 2011, 438).

5.9.4.2.1 Railing inscriptions - Most of the railing inscriptions are found inscribed on the inner face of *tabha* (uprights) and the *ushnisha* (coping stone) where there are no sculptural depictions. Inscriptions are absent over the *suchis* (crossbar). Inscription no. A. 15 of Sri Satakarni Vasisthiputra record the grants for upright

(*payaka*), crossbar (*sujika, suchi*), upper drum slab (*medhi, agatukapata*) and umbrella (*chatari*). The inscription is in two lines and is a lengthy one. The *tabha* was placed horizontally and inscribed along the longer axis. Some of the inscriptions are pre-Christian as well. Inscription No. A.2 has recorded the financial aid in the form of 800 *karshpanas* and 250 *dinaris* made over towards the construction of the *chaitya*. The inscriptions on ushnisha are written horizontally and most of them are donations made by monks, nuns and their family members (Poonacha 2011, 438-439).

5.9.4.2.2 Lower Drum Slabs - The inscriptions on the lower drum slabs are inscribed over the plain horizontal upper band (*pattika*) and are neatly engraved. Sometimes the sculptured figures in the ornate *vedika* slabs are also inscribed identifying the respective depictions (Poonacha 2011, 439).

5.9.4.2.3 Sculptured Cornices – Many a narrative frieze placed over the *ayaka* platform have inscriptions on the frontal slanting ridge acting as top border (Poonacha 2011, 439).

5.9.4.2.4 Flower receptacles (Pushpagrahinis) – *Pushpagrahinis* are the architectural units used to hold the *vedika* panels of the Mahachaitya *in situ*. They are fashioned in the form of an ornate peripheral border over the *vedika* and also act as a receptacle to collect the flowers and other offerings made over to the chaitya. The inscriptions are found engraved upon the frontal ridge of the *pushpagrahinis* in which some of the short donations are mentioned. Most of them record the donations of *pushpagrahinis* whereas some of them (Ins. Nos. A. 62 and b.217) reflect the donations of a *pata*, which could be *vedika* slab along with

pushpagrahini. A donee has made a gift of 10 flower receptacles as mentioned in inscription no. B. 210 (Poonacha 2011, 439).

5.9.4.2.5 Floor Slabs – The slabs paved in the pseudo-*pradakshinapatha* preceding the *pushpagrahinis* over the *vedika* also carry inscriptions recording the donations made to the *chaitya*. Inscription no. A. 75 is of importance as it records the meritorious gift of the final course (*agatukapata*) of the stupa by a nun Dharmasri during the rule of Vasisthiputra Sri Pulumavi. There is a sculptural rendering of upper drum slab with inscriptional reference to Pulumavi bequeathing the city of Ujjain to a certain Ajayata (Poonacha 2011, 439-440).

5.9.4.2.6 Sculptures of Buddha – The *ayaka* platforms and the *pradakshina-patha* were used to accommodate the Buddha sculptures in the third phase of the structural activity. Out of 13 sculptures of Buddha at least 10 bear inscriptions mentioning the donees who caused them were from Vakataka territory. There is some information about the guild of sculptors which may have prevailed at that time. The *medhi* slabs are the most sculptured, large size architectural members next to pillars. They have inscriptions in bold letters of comparatively large size to enable their visibility at the top of the registers recording the donees. The sculptural renderings pertaining to the life of the Master, the *Jataka* tales or persons depicted in the panels are identified and inscribed at the bottom register above the railing design. Many inscriptions on *pushpagrahinis* reflect the donations made towards the *tharas* or the courses of the dome (*anda*) (Poonacha 2011, 440).

5.9.4.3 Inscriptions from first century BC to first century CE – These are essentially associated with the early Satavahana phase of the

structural/ornamentation activities in the stupa complex. The thematic delineations associated with these inscriptions have a pronounced hinayana affinity (Poonacha 2011, 440).

5.9.4.4 Inscriptions from second century CE to third century CE – The inscriptions are associated with the middle and late phase of the structural embellishment in the *stupa* complex and the themes associated with the records show a gradual leaning towards *Mahayana* ideologies. The latest records and particularly those engraved on the Buddha pedestals and Buddha padas indicate the supremacy of *Mahayana Chetiyavadins* at the site. The donatory inscriptions have names of the patron king, along with his reign year, season, months/fortnight and the day (Poonacha 2011, 442).

5.9.4.5 Inscriptions of third century CE (250 CE) (Buddha pedestals) - These inscriptions are of the latest stage in the Mahayana phase of the additions made to the stupa in the form of positioning of the Buddha sculptures. The script used here can be taken as a precursor of the box headed characters of the palaeography of the succeeding Vakata, Ikshvaku, Kadamba periods as also the beginning of southern variety of Deccan Brahmi (Poonacha 2011, 442-443).

5.9.4.6 Information from the inscriptions

Inscriptions mention names of several rulers. Mauryan emperor Asoka is mentioned twice. Satavahan rulers mentioned include Simuka, Siri Satakarni, Sundara Satakarni, Matalaka, Siva Siri Pulumavi, Gautamiputra Satakarni, Vasisthiputa Siri Satakarni, Yajna Sri Satakarni and Madhariputra Pulumavi. In the inscriptions the stupa is referred to as *Adholoka Mahachaitya* (the great *Chaitya* of the nether worlds). The names and their variants by which the architectural

members were known are also found in these inscriptions. *Ayaka tabha* (*ayaka* pillar), *chatari*, *chhata* (umbrella), *gola* (*anda*-dome slabs), *pushpagrahanika* (flower receptacle) are some of the terms used for architectural members in the inscriptions (Poonacha 2011, 445).

Kanaganahalli stupa, which was part of the suburb of the greater Sannati was in contact with the established contemporary Buddhist centers on the one hand and leading trade centers on the other as it was located on one of the trade routes of the ancient *Dakshinapatha* connecting Pataliputra and Banavasi via Paithan and Vidisa. It had contacts with the major trade centers like *Isila* (Brahmagiri), *Kupana* (Koppal) in the far south, *Dhanayakataka* (Amaravati) and *Kotura* on the northwest and east, *Vakataka Vishaya* and *Ujjain* in the central and further western India. These place names are found mentioned in the inscriptions. *Dhanayakataka* and its variant forms occur more than six times. There is reference to *Vakataka Vishaya*. Some of the place names such as *Kotura*, *Ujjain*, *Isila* and *Kupana* occur only once. *Kashi*, *Chedi*, *Ujjaini*, *Ramagrama* are few other place-names occurring in inscriptions of Kanaganahalli (Poonacha 2011, 445-446).

The name of Kashi occurs as an identification of a character as *Bodhisato Kasirayo* evidencing the ancient city of Benaras. Ujjaini was the famous capital of Vidisha. In the inscriptions at Kanaganahalli Ujjaini occurs in the context of the visit of Pulumavi to Ujjain probably after the victory over Chastana. Ramagrama is mentioned in the context of a label inscription referring to one of the highly sculptured *stupa* depictions entwined by Nagas as *Ramagamilo athabhagha thubho upari*. It is known that Coliyas had built a *sharirika stupa* over the relics of Lord Buddha at Ramagrama after having received one of their shares of eight divisions. The term “Vakataka” referring to the toponym of a territory or a clan occurs eight times. All these inscriptions are found engraved on the pedestal of Buddha sculptures kept in the *pradakshinapatha* and over the *ayaka* platforms. It is

obvious that from the point of view of the phases of construction of the *chaitya* and palaeographically, the inscriptions and the sculptures belong to the last phase of the embellishment of the maha stupa. The term occurs as *vakatichana* and *vagatichana* (Poonacha 2011, 446). Vakatakas were the post-Satavahana rulers in the upper Deccan, probably belonging to the Vindhyan region of present Madhya Pradesh to the north of the river Narmada. In their later stages they moved southwards to Vidarbha and other regions of Maharashtra, Andhra Pradesh and Karnataka. They seem to have replaced the Andhra Satavahanas in the south and Vidarbha around the end of third century CE (Poonacha 2011, 446-447). There are at least two inscriptions referring to Vakatakas. The inscription of Amaravati (No. A. 14) is a fragmentary record mentioning (the gift of) Vakataka or *pakataka*. According to R.Chandra the *Pakatakas* could be same as Vakatakas. He further suggests that the Vakatakas in the Deccan could be traced as far as second century BC. The earliest known epigraphical information in Karnataka region comes from the Bidar plates of Devasena (fifth reign year – 455-458 CE). Devasena is the fifth king in the Vastugulma branch of the Vakatakas and the father of Harisena. The southern expansion of the Vakatakas had started in the later part of the reign of Pravarasena-1 (275-335 CE) by the end of third century CE (Poonacha 2011, 447). The *anda* slabs carry inscriptions like *Kupanakasa*, probably indicating the gift by a person belonging to Koppal (Karnataka). The presence of two minor rock edicts at Koppal – at Palkigundu and Gavimatha at the highest altitude on the north and southern granatoid hillocks bordering the town which also has a number of dolmens of megalithic period, remnants of the brick-built structures (Satavahana period) on the foot of the hills particularly leading to the Palkigundu inscription reflect that Koppal was a well-established center. The toponym Mahagama is found twice (Ins. Nos. A. 3 & B. 158) in Kanaganahalli inscriptions. This place can be identified with the present day Mahagaon in Gulbarga district. Explorations

have led to the discovery of black-and-red ware, Russet-coated painted ware and red-slipped ware, characteristic of the early historical period. A seven-lettered label inscription provided on the plain border below the lower register of a drum slab of stupa at Kanaganahalli reads *galatiko pavato*, i.e., “Khalatika parvata” identified with the famous “Barabar hills” in Bihar (Poonacha 2011, 447).

5.5 Monastic-orders/ranks

Several people seem to have contributed towards the construction and embellishment of the stupa. Amongst them many belonged to the Buddhist order. The designations indicate different positions in the monastic order such as *upasaka*, *upasaki*, *bhiku/bhikuni*, *thera*, *pavayita*, *antevasi* and *sutrantika Dharmaadhyaksha Upadhaya*, etc (Poonacha 2011, 447-448).

5.6 Religious affinity –

The sculptural delineations in the early phase have a strong Hinayana affinity and in the second phase there is more pronounced Mahayana influence. However, in the inscriptions there is no reference to any particular sect of Buddhism such as Theravada, Mahisasaka, etc. There is information about the hierarchy of monks and teachers like *thera*, *achariya*, *dhamakadhika*, *pavayita*, *bhayata*, *bhiku* and *samana*, etc. But the specific sect to which they belonged is not mentioned. The sculptural depictions of Kashypa, Dudhubisara (Dundubhisvara) and others who were deputed by the Mauryan emperor Asoka for the spread of Buddhism in the Himalayan region and few references to Haimavata sect in the form of *Himalaya dhama sisehi* suggests that the religious sect at Kanaganahalli could be Haimavata (Poonacha 2011, 448).

5.7 Coins

5.7.1 Coins from Howell's excavation

Excavations and explorations at Sannati and its suburbs have yielded a large number of punch-marked coins (Fig.5.49), inscribed and unscribed coins of lead, potin, copper and silver. A total of 79 coins in lead, copper and silver were reported by Howell from Sannati and its environs. Amongst these, 40 were located in stratified context from the mound at Anegutti, 36 from the unstratified deposits at Ranamandala and three were reported as surface finds in the village Sannati. These coins have been tabulated under 19 types and sub-types and ascribed to five Satavahana rulers. These include Satakarni -1; King Satavahana identified as Kumara Satavahana, son of Satakarni-1; Sri Satakarni (Satakarni 2); Pulumavi-1, son of Satakarni-2; Vasishthiputra Pulumavi or Vasishthiputra Siva Siri Pulumavi (Poonacha 2011, 569).

5.7.2 Coins from Prof Poonacha's excavation

5.7.2.1 Number of coins - A total of 125 coins of circular, ovalish and square shape were retrieved from the excavation at Ranamandala habitation site (16) and the Kanaganahalli stupa site (109). Out of these, 122 belong to the early historic period and three are of late medieval period (Poonacha 2011, 569).

5.7.2.2 Coins from Ranamandala – Of the stratified coins from Ranamandala area, 14 are of lead and one each is of copper and potin (Poonacha 2011, 570).

5.7.2.3 Coins from the stupa complex at Kanaganahalli – 48 lead, 20 potin and 7 copper coins retrieved from the site are inscribed and are of paramount importance in reaching a chronological sequence of different phases of structural activity in the stupa complex. Twenty-two coins of lead, copper and potin are worn out, mutilated and have incomplete legend. Amongst these coins, a few circular and square copper coins have symbols without any legend and are die-struck (Poonacha 2011, 570).

5.7.2.4 Issuer of coins and symbols used - These coins were issued by Satavahana kings – Siri Satakarni, Pulumavi, Siva Siri Pulumavi and Yajna Satakarni (Fig.5.50). It is important to note that irrespective of the issuer king, all these coins bear the three-arched hill with or without a crescent above as the common imprint on the obverse along with the legend mentioning the name of the ruler in faint letters. The reverse has Ujjain symbol with or without pellets (Poonacha 2011, 570).

5.7.2.5 Weight of coins – Irrespective of the metals used, the coins have been found to weigh between 2 to 4, 4 to 6, 6 to 8, 8 to 12 gm, and occasionally weigh 28 gm. On an average the circular coins range from 1.2 cm to 2.2 cm in diameter (Poonacha 2011, 571).

5.7.2.6 Lead and copper coins – Lead coins occur in various shapes like circular, oval, rectangular and/or irregular and range in weight between 2 and 28 gm. The

copper alloy coins are square, rectangular and circular in shape and weigh between 2 and 12 gm (Poonacha 2011, 571).

5.7.2.7 Division of coins and symbols used – The three-arched hill is the most common symbol found on majority of the coins. The symbol may be with or without crescent and has prominent base line, sometimes with well struck triangular head followed by a straight or wavy river line. Other auxiliary symbols which normally occur on the obverse include animals such as Bull, Lion and Elephant; moon, *swastika* and triangular-headed standards. The legend along the periphery is normally in an anti-clockwise direction but occasionally it occurs clockwise also. The reverse bears Ujjain symbol sometimes accompanied by *srivatsa*, *nandipada* and sun. The Ujjain symbol is depicted with single or double circles with elevated or flat pellets at the center depending upon the die used for casting (Poonacha 2011, 571).

5.7.2.8 Location of coins - The occurrence of the coins from the surface of hemispherical mound begins from an average depth of 0.20 m from the mound level in layer (2) and the concentration is maximum at a depth of 1.80 m and continues further below in lesser numbers. A higher percentage of coins are concentrated towards southeast and northwest of the stupa, near the respective entrances at north, south and west (Poonacha 2011, 571).

5.7.2.9 Entry points to the stupa – There is a *Yaksha* bearing the bowl of offerings and also an epigraphical record, on the southern side over the eastern

corner tabha, recording for the first time at Sannati about the cash grant of 800 *karshpanas* (*athasatakahapanas*) and 200 *darana* (dinars ?). The western entrance, the land approach from Sannati covering other important religious centers, also had a *Yaksha* sculpture installed at the northern entrance (Poonacha 2011, 571-572).

5.7.2.10 Typology of coins and rulers mentioned therein –

Square, silver punch-marked coin

Obverse – 1) Six spoked wheel at top right corner 2) Humped bull facing right within a rectangular frame to the left of the wheel 3) Sun 4) Moon 5) Peacock facing left over a hill along the bottom border.

Reverse – Diagonally struck Caduceus symbol.

This is an important coin and the only silver punch-marked coin retrieved from Kanaganahalli-Sannati area and seems to provide a firm basis for dating the habitation at Kanaganahalli-Sannati area to the pre-Asokan-Mauryan period. The Caduceus symbol, especially occurring as a prime reverse symbol, appears on the punch-marked coins of silver and copper of the Mauryan federal states during the pre-Asokan period and continues during Asokan and post-Asokan period. The symbols also appear in the coins found at Amaravati, Karimnagar, Gulbarga, Raichur, etc which are all within the core zone of the Satavahana empire consisting of Asika,-Mulaka-Asmaka region (Poonacha 2011, 572).

Circular uninscribed die-struck copper coins – 12 die-struck copper coins were recovered from the excavations (Poonacha 2011, 572).

Coins of Maharathi Siri Satavahana - There are six coins of Maharathi Siri Satavahana, five retrieved from the stupa mound and one from Ranamandala from Sannati. Howell reported identical coins from Ranamandala. He attributed them to Kumara Satavahana, son of Satakarni 1, based on the main and auxiliary symbols on coins found in Nevasa and elsewhere. J. Varaprasada Rao attributed the coins to king Satavahana. I.K.Sarma considered the coins as belonging to king Satavahana, son of Sri Satakarni 1. In his opinion the three-arched hill is a territorial symbol. He maintains that Satavahana's rose to power in the three ancient zones of Asika-Asmaka-Mulaka in which northern Karnataka and the contiguous Andhra-Telangana areas fell. Their fortunes were linked with these three territories. King Satavahana, the second monarch, heralded the issue of the coin type with three-arch hill surmounted by the triangle-headed standard for circulation in Sannati area to impress on the conquered subjects the rise of the Satavahana power. The regions of northern Karnataka, its contiguous Telangana areas of Andhra, were wrested by this Satavahana king from a later Mauryan ruler or their provincial governor. According to A.M.Shastrri Chimuka Satavahana himself was responsible for issuing alternately the coins mentioning him only as king Satavahana and the coins with both the legends i.e. Chimuka Satavahana and Satavahana have been reported from Kotilingala and Sanga Reddy in Karimnagar District of the Telangana region of Andhra Pradesh. The coins with the name Satavahana alone have been reported from numerous sites including Kondapur in Medak district of Andhra Pradesh, Nevasa in Ahmadnagar district, Junar in Pune district, Marathwada and Vidarbha regions of Maharashtra and from Sannati in Gulbarga district of Karnataka. Simuka-Chimukha is assigned a reign of 23 years unanimously in the Puranas. A major part of this period was spent in acknowledging the overlordship of Kanvas. It was at the close of this period that he got rid of vassalage, declaring independence. In this background, the

availability of the coins of king Siri Satavahana with the suffixes *Maharathi* and *Rajno* assume greater significance especially as they are from stratified context. It can be concluded that Siri Satavahana, identified with Kumara Satavahana, son of Satakarani 1 is Simuka-Chimuka Satavahana, founder of the Satavahana dynasty as per the Puranic texts. He issued coins in the vassal capacity under the Kanvas with the legend *Maharathino Siri Satavahanasa* and after declaring independence, with the royal epithet *Rajno* followed by the common name Siri Satavahana (Poonacha 2011, 573-574).

Coins of Satakarni – Twenty five coins of Satakarni have been found from the excavations (Poonacha 2011, 574).

Coins of King Sri Satakarni – Most of the coins retrieved from Kanaganahalli excavation are of Sri Satakarni and they occur in lead and potin. Coins of copper are conspicuous by their absence (Poonacha 2011, 575).

Coins of Siva Siri Pulumavi - Eight coins of this ruler have been found, of which three are of potin and five are of lead (Poonacha 2011, 576).

Coins of Yajna Sri Satakarni – Four coins of Yajna Sri, the last powerful imperial ruler, have been found. Of these coins, three are of lead and one a potin coin (Poonacha 2011, 576).

5.7.2.11 Three-arched hill – The three-arched hill first used by the Mauryas is a significant symbol denoting the territorial features. It appears as a common denominator on the obverse of all the coins with the exception of a few die-struck coins in copper and silver punch marked coin. There is a possibility that the continuation in toto of this symbol of the Mauryas by the Satavahanas may suggest

the mastery gained over the Mauryan territory of the southern periphery by the early Satavahana kings as evidenced by a few coins in which the restructed coins reflect a triangular headed standard superimposed on the three arched hills, especially of early Satavahana rulers (Poonacha 2011, 577).

5.9 Material Assemblage for the Megalithic, Mauryan and Satavahana period

5.9.1 Megalithic - The megalithic pottery (Fig.5.51) consisted of black-and red ware. Other important variety was black ware which could have been a deluxe ware of the period. Iron slag, nails of iron were recovered (Poonacha 2011, 503). The main shapes available in black-and-red ware included dish, bowl, shallow bowl, deep bowl. Some of the shapes such as dish, bowl, deep bowl show resemblance with ware from Maski, Satanikota. Among main shapes in black ware are bowl, shallow bowl, shallow bowl cum lid, deep bowl, vase, dish. Black ware pottery like bowl show affinity with pottery from Brahmagiri. Red ware comprised of vase (Poonacha 2011, 506-511). The Megalithic/Mauryan phase has given evidence for pottery, recovered from a strata which has shown indications for both megalithic and Mauryan phase. The main shapes found in black and red ware are storage jar, dish, bowl, deep bowl, shallow bowl, vase. The shapes commonly met with in red ware are vase, basin, dish, bowl, lid. Shapes available in black ware are vase, dish, bowl (Poonacha 2011, 511-517).

5.9.2 Mauryan - One circular hearth made of burnt bricks was found. The burnt bricks are of wedge-shape and 15 cm in height (Poonacha 2011, 502). The pottery of the Mauryan period (Fig.5.52) comprised of red ware, black and red ware and

black ware. The bulk of the pottery is of red ware. It is available in wide mouthed basins, wide mouthed medium to small sized shoulder carinated vessels, unique collar everted, flanged spheroid pots, bowls, dishes, conical bowls, featureless rimmed bowls. The black and red ware and black ware is available in limited quantity and can be seen in bowls and dish variety (Poonacha 2011, 502-503). One sherd of NBPW has been collected from the foundation pit of one of the *tabhas* along with a silver punch-marked coin (Poonacha 2011, 535). Among other Mauryan antiquities mention can be made of stone objects (Fig.5.53) such as polished stone pestles, grinders, shell objects, (Fig.5.54) beads (Fig.5.55-56), etc (Poonacha 2011, 504). The main shapes available in red ware are basin, vase, lid, bowl, deep bowl, large bowl. The principal shapes found in black ware are vase, carinated bowl. The prominent shapes in black and red ware are carinated bowl, bowl, vase (Poonacha 2011, 517-521). The pottery of the Maurya-Satavahana period included red ware and black and red ware. Shapes available in red ware are basin, jar, vase, lid-cum-bowl. Black and Red ware is available in dish, bowl, shallow bowl, large bowl. Black ware is represented by vase, dish, bowl, shallow bowl, deep bowl, wide-mouthed bowl (Poonacha 2011, 521-525).

5.9.3 Satavahana - One of the structures found at Ranamandala was 45 cm in height and has 5 courses of bricks and is laid in mud mortar. Each brick measures 46x21x9 cm. The second structure has seven courses and stands to a height of 62 cm. It seems to be a part of the first structure and the bricks are similar in measurement (Poonacha 2011, 502). The pottery (Fig.5.57) of the Satavahana period included black ware, red polished ware, red ware, black and red ware, chocolate brown ware, Rouletted ware, Russet-coated painted ware. Perhaps the most dominant ware of this period was red ware and was used for making

utilitarian pottery which included large storage jars, medium to small sized wide mouthed basins, spheroid water pots, lid and typical conical bowls. Bowls and dishes were also found in black ware and black and red ware (Poonacha 2011, 502). The main shapes available in red ware are basin, vase, miniature vase, carinated miniature vase, dish, bowl, shallow bowl, carinated bowl, storage jar. The prominent shapes in black and red ware are dish. Some of the terracottas are of religious affinity whereas others seem to be toys in the form of animal figurines. An important discovery is that of a smiling Yaksha with a typical elongated headgear with perforations which may have served as an incense stand. Other terracottas (Fig.5.58-59) found here include horse, human heads of both man and woman, animal figurines such as elephant, a multi-hooded naga, etc (Poonacha 2011;546, 548). Shell ornaments (Fig.5.60) from the Satavahana period comprised of fragments of bangles, conch-shaped pendant, beads, ear-rings, rings. Stone objects were recovered (Fig.5.61). Beads (Fig.5.62-63) of semi-precious stones such as carnelian, crystal, jasper, amethyst, agate, lapis-lazuli were collected along with terracotta beads (Poonacha 2011, 556-557).

5.10 Conclusion - Sannati was a prominent Buddhist center in Karnataka in the ancient period. Sannati and the closeby settlements were endowed with typical Buddhist art and architecture which points towards the prosperity that the region may have enjoyed around the beginning of Christian era. This prosperity can be attributed not only to the locally available sources but also to the possibility that Sannati may have been located on a trade route. Furthermore, donations were received for the maintenance of the stupa structure and for the execution of sculptures. Thus, it was a center of both art as well as ideology which had local following and attracted visitors from outside. The large physical expanse, varied and rich archaeological assemblage, evidence for social stratification, bureaucracy

and ruling stratum is indicative of beginning of urbanization and this would be discussed in detail in the subsequent chapter.

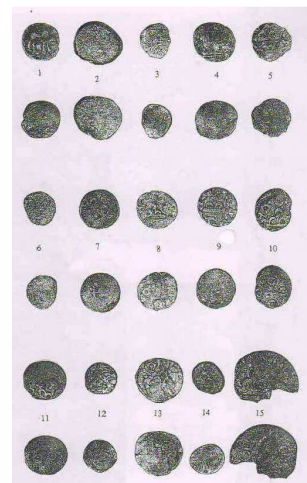
Illustrations



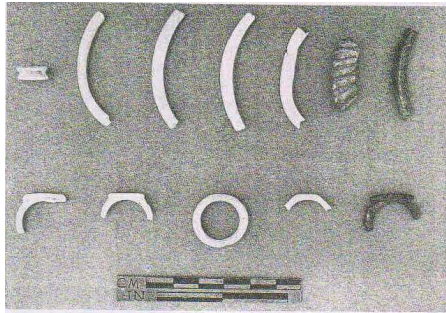
Fig. 5.1



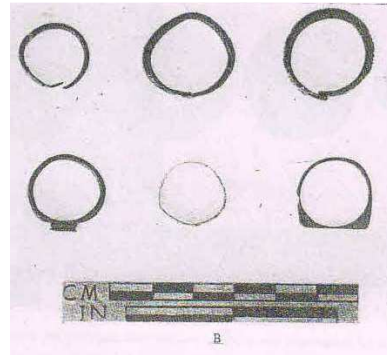
Bathing Ghat (Fig.5.2)



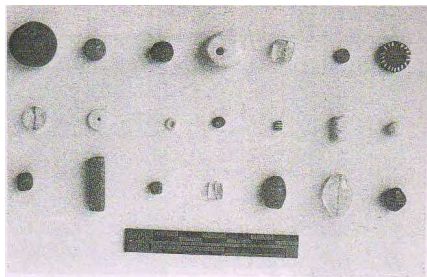
Coins (Fig.5.3)



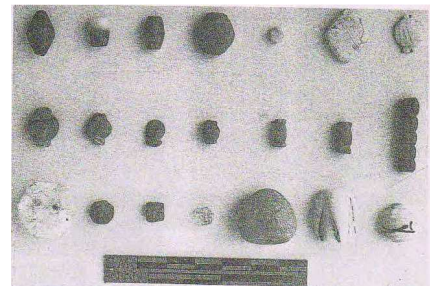
Bangles, rings and ear stud (Fig.5.4)



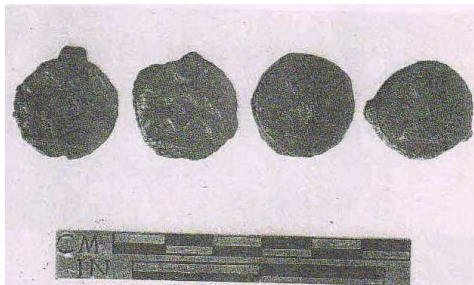
Finger and toe-rings (Fig.5.5)



Beads (Fig. 5.6)



Beads (Fig.5.7)

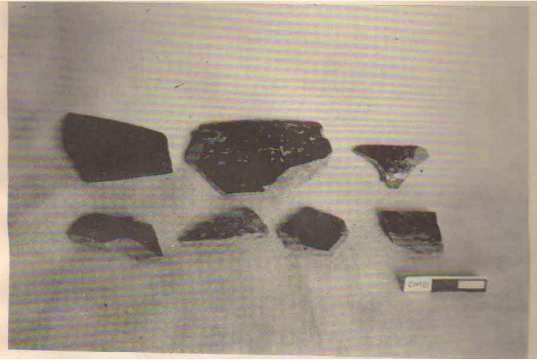


Cast copper discs (Fig.5.8)

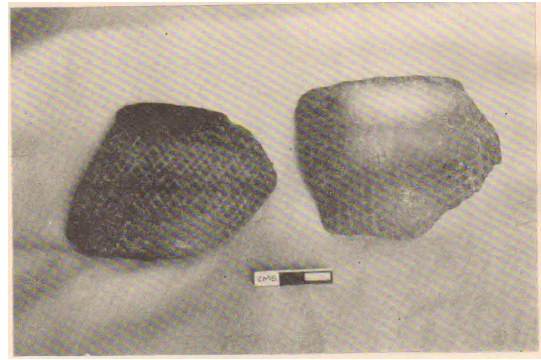


Terracottas (Fig.5.9)

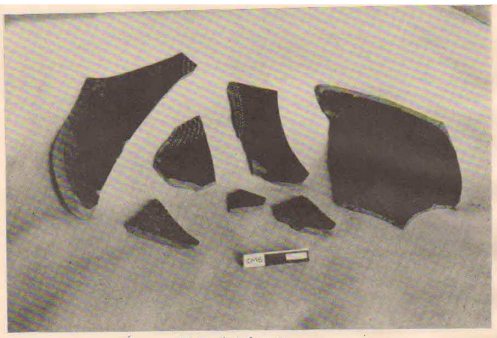
**Images from
(J.R.Howell – Excavations at Sannathi, 1986-89. New Delhi. 1995)**



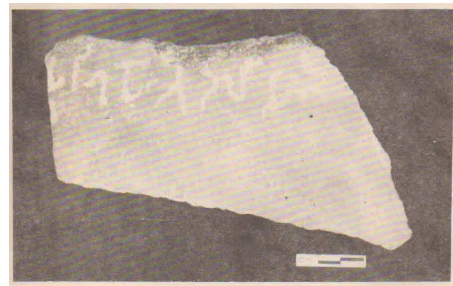
Northern black polished ware (Fig.5.10)



Russet coated white painted ware (Fig.5.11)



Rouletted ware (Fig.5.12)



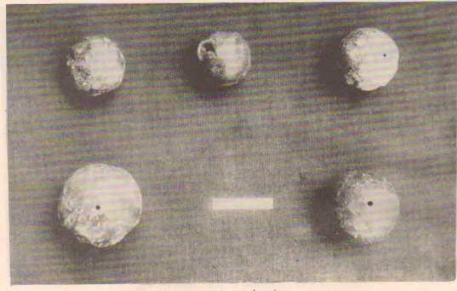
Inscribed pottery (Fig.5.13)



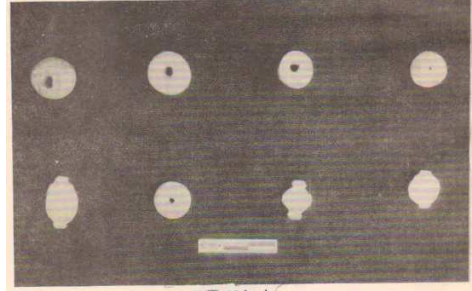
Lajja-Gauri (Fig.5.14)



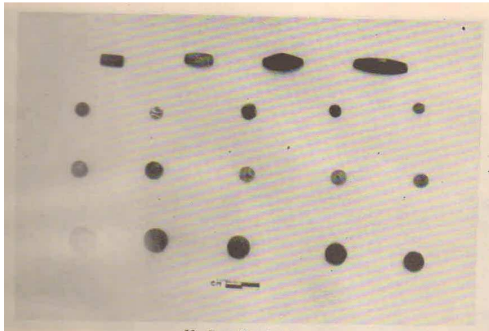
Yaksha (Fig.5.15)



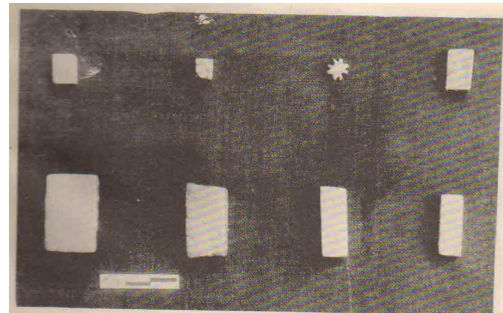
Green jasper beads (Fig.5.16)



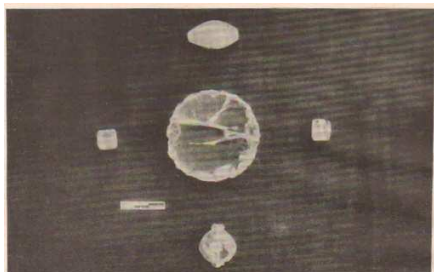
Stone beads (Fig.5.17)



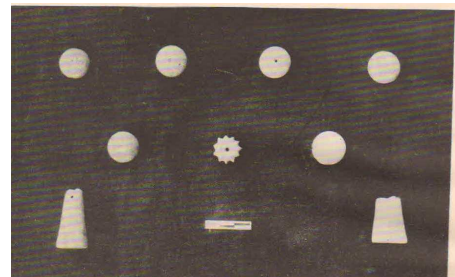
Carnelian beads (Fig.5.18)



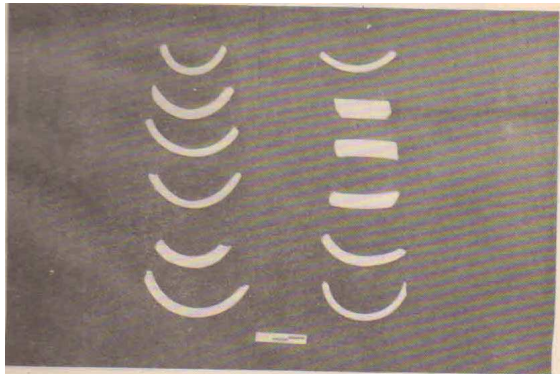
Lapislazuli beads (Fig.5.19)



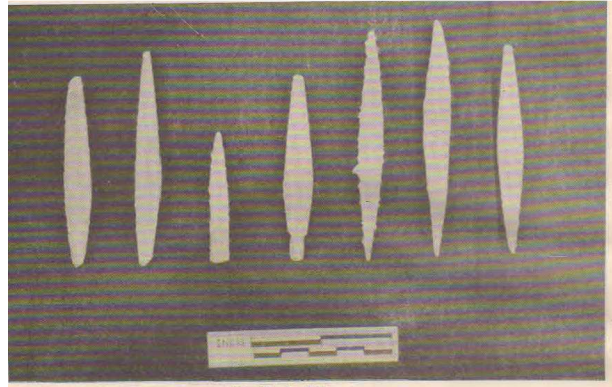
Crystal beads (Fig.5.20)



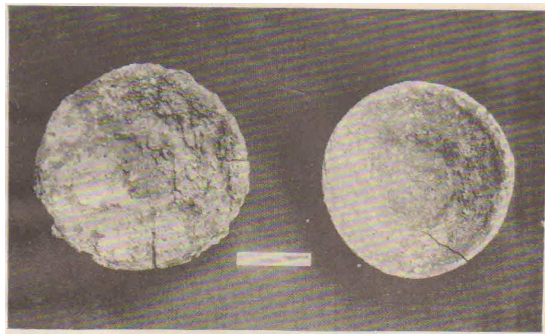
Terracotta beads (Fig.5.21)



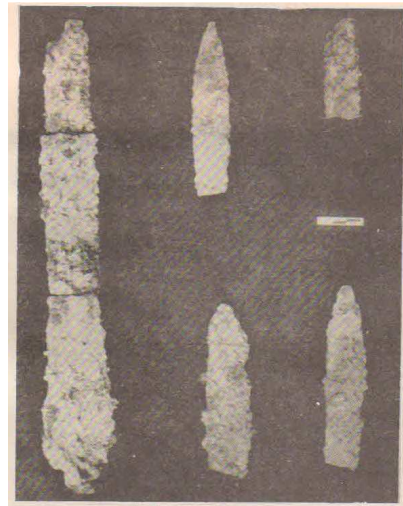
Shell bangles (Fig.5.22)



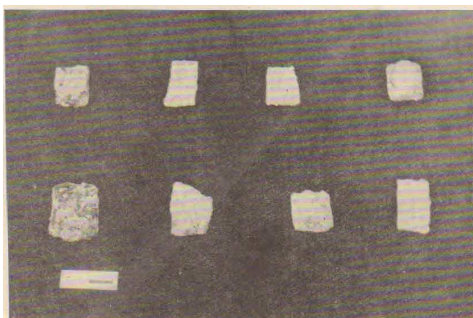
Kohl-sticks (Fig.5.23)



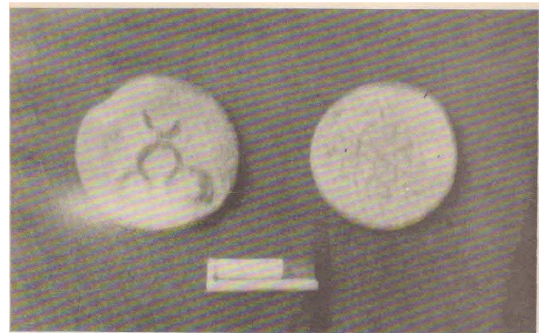
Iron and Copper bowls (Fig.5.24)



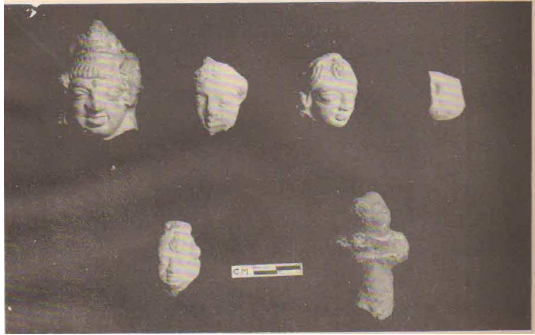
Iron implements (Fig.5.25)



Punch-marked coins (Fig.5.26)



Satavahana coins (Fig.5.27)



Terracotta human heads (Fig.5.28)



Granary (Fig.5.29)

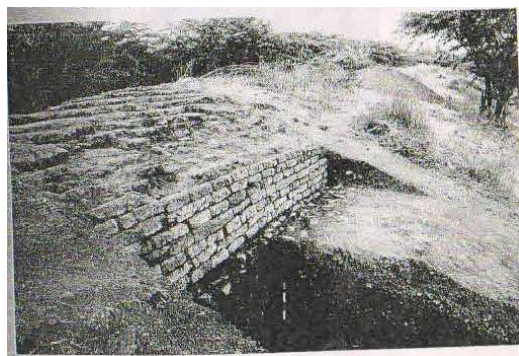


Roman clay pendant (obverse) (Fig.5.30)



Roman clay pendant (reverse) (Fig.5.31)

**Images from
(D.V.Devaraj and H.T.Talwar – Interim Report on the Excavations at Sannati, 1993-95.
1996. Mysore)**



Fort wall, Ranamandala, Sannati (Fig.5.32)



Mahastupa, Kanaganahalli (Fig.5.33)



Chimukha Satavahana (Fig.5.34)



King Satakarni (Fig.5.35)



King Pulumavi at Ujjain (Fig.5.36)



King Matalaka (Fig.5.37)



Sundara Satakarni (Fig.5.38)



Mauryan Emperor Asoka (Fig.5.39)



(Fig.5.40)



(Fig.5.41)

(Fig.5.40 and 5.41) Revival of Bodhi tree and propagation of Dhamma by Asoka



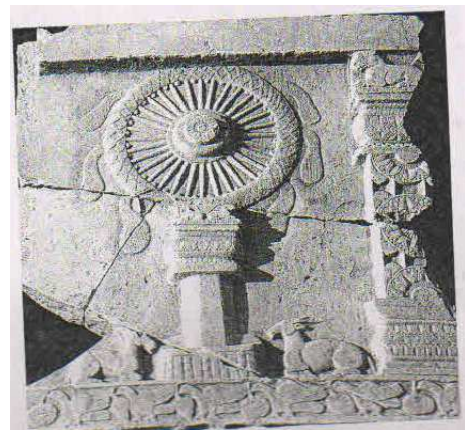
(Fig.5.42) Seated Buddha



(Fig.5.43) Seated Buddha



(Fig.5.44) Nine-hooded Naga



(Fig.5.45) Dharmachakra



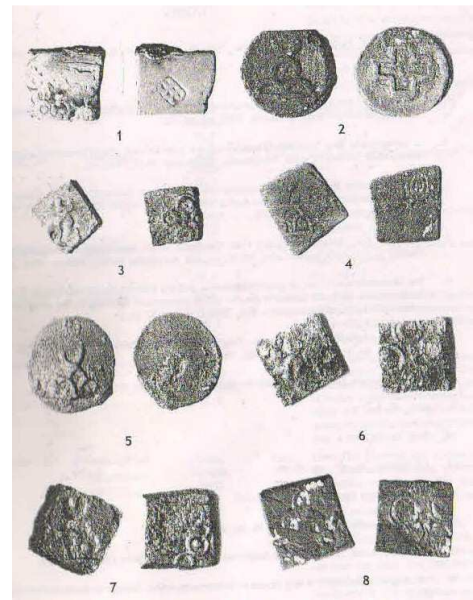
(Fig.5.46) Buddhapada



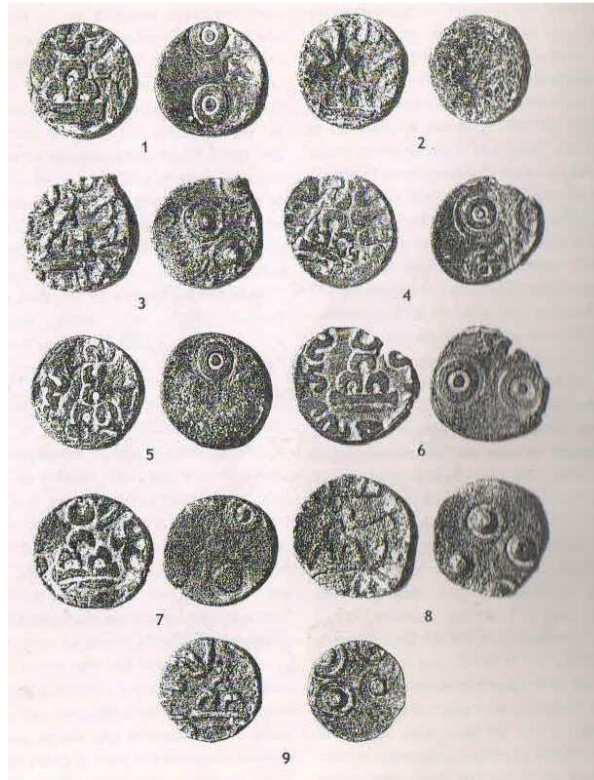
(Fig.5.47) Representation of animals



Asokan Inscriptions (Fig.5.48)



(Fig.5.49) Punch-marked coins



(Fig.5.50) 1 Coin of Sri Pulumavi, 4-7 Coins of Siva Siri Pulumavi 2-3 &8-9 Coins of Yajna Sri Satakarni

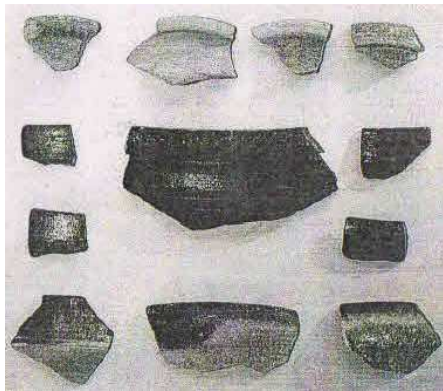


Fig.5.51 Pottery of megalithic period

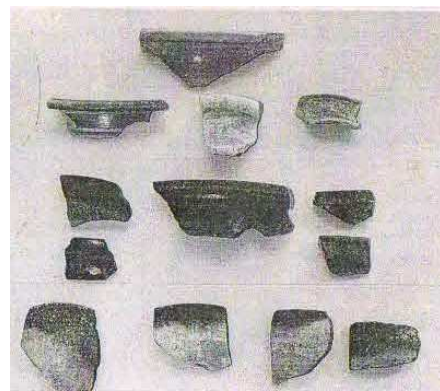


Fig. 5.52 Pottery of Mauryan period

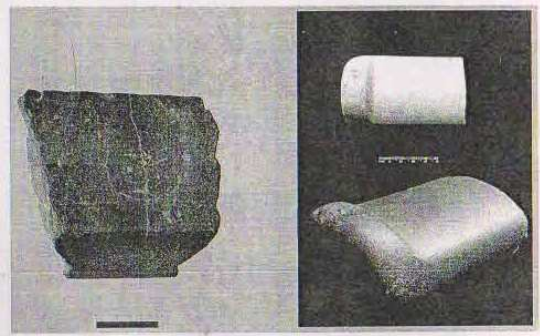


Fig.5.53 Stone objects of Mauryan period

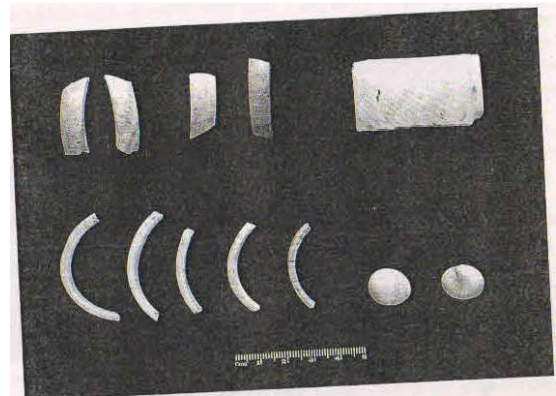


Fig.5.54 Shell objects of Mauryan period



Fig.5.55



Fig.5.56

Fig.5.55 and Fig.5.56 Semi-precious beads and terracotta beads of Mauryan period

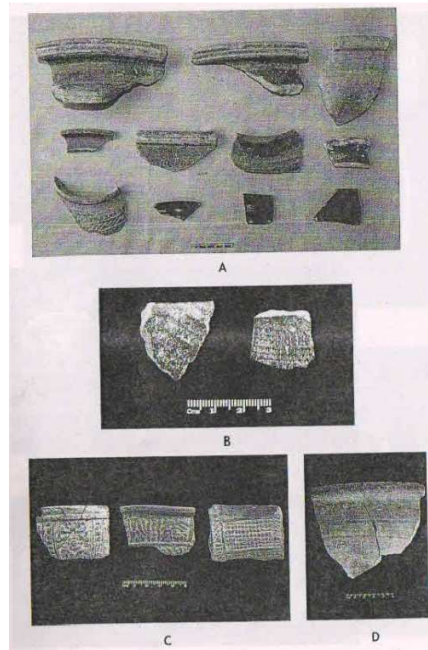


Fig.5.57 Satavahana pottery

A.Red ware B&C. Decorated ware D. Inscribed pottery



Fig.5.58



Fig.5.59

Fig.5.58 and Fig.5.59 Terracotta human heads and other terracotta objects

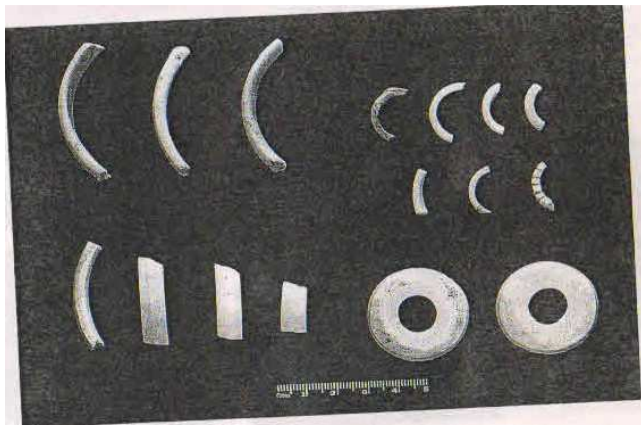


Fig.5.60 Shell objects

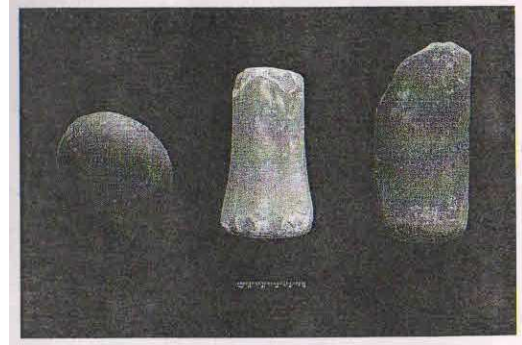


Fig.5.61 Stone objects



Fig.5.62 Semi-precious beads



Fig.5.63 Terracotta beads

**Scanned images from
(K.P. Poonacha - Excavations at Kanaganahalli (Sannati), Taluk Chitapur, District
Gulbarga, Karnataka. New Delhi. 2011)**

Other images were taken by the author during field visit in October 2012

CHAPTER SIX

6. Urbanization and urban settlements in North Karnataka - a comparison with Middle Ganga Plain and Deccan

6.1 Introduction

The chapter deals with the concept of urbanization and the possible presence of typical urban traits in early historic Karnataka. The major early historic sites in North Karnataka are Sannati, Maski, Brahmagiri and Chandravall. Vadgaon-Madhavapur and Banavasi lie outside North Karnataka. However, archaeological evidence from these sites is significant and has been incorporated in the analysis of early historic cultures. The distribution of the excavated and explored sites of the early historic period i.e. the settlement pattern in North Karnataka has been taken into account. An effort is made to identify zones which have relative concentration of settlements and to see how the available sources influenced the development of these zones/ large unitary settlements. By the early centuries of the Christian era there was evidence for the crystallization and gradual consolidation of the local level elite as hinted by the inscriptions. This elite must have been crucial in the establishment and sustenance of settlements that had a certain 'size' and other urban contours/features. Furthermore, the elite would be associated with state machinery either directly or indirectly. In this context it would be useful to understand the impact of prevailing ideological/religious beliefs on the contemporary socio-political order. The nature/character of individual settlements is examined. The main aim has been to establish that material culture in North Karnataka during the early historic period had attained a level where it could be regarded as 'urban'.

6.2 Urbanization and its background

Urban centers may be considered as forming parts of every civilization, though their nature varied considerably. The main *criteria* of an urban centre is that it performs specialized functions in relation to a broader hinterland. The biggest urban centers in early civilizations were the capitals of city-states and the capitals and provincial administrative centers of territorial states where normally a few thousand people would live. People living in cities normally did not produce food. Urban settlements depend on the food produced in the surrounding countryside. Urban centers in the past were places which could be associated with high-level political and administrative activities, specialized craft production, marketing, long-distance trade, higher education, artistic and cultural achievements, show of splendour, court life and religious rituals. Development of cities has been promoted by the upper classes who liked to use them to achieve their personal and collective goals. It was in the interest of the upper classes to live in cities as it meant having access to all the goods and services which they may have needed. It also gave them an opportunity to regulate specialized activities in such a way which only enhanced their power and well being (Trigger 2003,120-121).

In the course of many millennia, human societies have witnessed major changes in their social order. Ten thousand years back, human beings lived in small, mobile groups which survived on wild plants and animals. Mostly the hunting groups would domesticate local plant and animal species which would ultimately result in a way of life related to farming. The agrarian way of life contributed to greater sedentarism and an expansion in population and very often migration and trade would help in the spread of agriculture in new territories. After some time many of the farming societies turned themselves into much bigger, more complex social systems marked by cities, political states and class inequalities. This may be regarded as the process of cultural evolution. Systematic research on cultural

evolution began with a group of nineteenth-century anthropologists, of whom the most important were Herbert Spencer and Lewis Henry Morgan. It has been postulated that the process of urbanization was akin to a complete transformation of social institutions and practices. Kings with real power emerged for the first time and this was accompanied by institutions of government and social divisions. As urbanization struck roots and developed further, economic activity expanded and the cities arose as a very obvious manifestation of the process. Gordon Childe (1950) used the term 'Urban Revolution' to refer to this interconnected series of changes which resulted in the development of complex, state-level societies. Gordon Childe was responsible for substantial social synthesis of archaeological data on the earliest states and cities and his model was a clear advance in scholarship in the mid-twentieth century. It would be appropriate to conclude that Gordon Childe's model served as the basis for nearly all subsequent theorizing on the establishment and functioning of the earliest states and cities (Smith 2009, 3-29).

It is held by many scholars that a society must have a surplus of food-stuffs before the establishment of a city. Improved agricultural technology which includes the plough, the wheeled cart and irrigation provided the bronze age society the surplus to support the artisans, specially full-time specialists in metal crafts and other non-food producing population of the city comprising of temple-priests and attendants and administrators. This kind of accumulation, according to Childe was a "precondition for the growth of the village into a city." In the city the accumulation of surplus was limited to a small class which ultimately divided the society into classes (Ghosh 1973,19).

It seems that urban centers originated independently in different parts of the world. The areas in which independent civilizations originated appear to have been characterized by several specialized micro-environments for which different

equally specialized subsistence sources were suitable. The existence of inter-dependent zones of this type promoted the formation of “symbiotic regions” within which the complementary distribution of subsistence products could be effected. Perhaps, it was to deal with this new order of complexity that writing systems were invented or further developed. This in turn contributed towards administrative complexity and lent formality and continuity to urban institutions. The personnel and facilities of the urban institutions led to the further growth of the major settlements in which they were located (McCadams 1979, 21).

During chalcolithic period many sites in Rajasthan, less than one hectare in area may be regarded as urban rather than as simple villages and this categorization is based on the presence of an economy with specialized manufacture and trade and a hierarchical social organization with central authority. In these settlements, food requirements are met with either internally or by nearby small satellite settlements in exchange of industrial products. It is a possibility that the sites may not be completely ‘urban’ as they tend to show incipient traits of urbanism. Urban settlements normally arise through growth within the economy due to trade benefits, industrial growth or agricultural maximization or because of contact with urban areas. However, in the Indian context they may be regarded as the outcome of increasing population, intensified food production, industrial development, exchange of materials and products within and beyond the local regions which resulted in the development of stratified society with power and wealth concentrated in the hands of a few (Deshpande and Shinde: 2006, 118-119).

The neolithic settlements were more densely populated than the purely hunting or food-gathering people and showed greater reliance on agriculture. The neolithic population density was not so much about town concentration but rather a matter of tiny villages which were scattered all over the land. During the period between 6000 to 4000 BC certain developments such as the use of ox-driven plough,

wheeled cart, sailboat, beginning of metals, irrigation and domestication of new plants led to an increased production and a marked improvement in technology. Whenever this technology was utilized in new areas which were suitable for human habitation the result was a sound economy which created conditions for the establishment of urban lay-out i.e. concentration of people in one place and these people generally would not grow their own food. Besides a sound economy, establishment of urban centers required a social organization in which a certain strata could appropriate a part of the produce for themselves. This strata which comprised of state officials, traders, clergy and artisans would live in towns and cities and not necessarily in villages as their power did not require them to be “present on the land per se”. Their living in town would give them a sense of power over the cultivators (Davis 1955, 429-430)

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6.3 Theories of Urbanization

The role of cities in early civilizations has been to perform specialized functions vis-à-vis a largely agricultural and comparatively undifferentiated hinterland. However, it is important that we first identify the benchmarks of urbanization. Gordon Childe emphasized on a series of inter-related social, economic, political and cultural changes which led to earliest states and cities, which could be clearly distinguished from older or contemporary villages. According to Gordon Childe, there are ten criteria for early states. All the ten abstract criteria can be deduced from archaeological data. The ten traits of urbanization are as follows – 1) in point of size the first cities must have been more extensive and more densely populated than any previous settlements 2) in composition and function the urban population already differed from that of any village ... full-time specialist craftsmen, transport workers, merchants, officials and priests 3) each primary producer paid over the tiny surplus he could wring from the soil with his still very

limited technical equipment as tithe or tax to an imaginary deity or a divine king who thus concentrated the surplus 4) truly monumental public buildings not only distinguish each known city from any village but also symbolise the concentration of the social surplus 5) but naturally priests, civil and military leaders and officials absorbed a major share of the concentrated surplus and thus formed a “ruling class 6) writing 7) the elaboration of exact and predictive sciences – arithmetic, geometry and astronomy 8) conceptualised and sophisticated styles [of art] 9) regular “foreign” trade over quite long distances 10) state organisation based now on residence rather than kinship.

The ten criteria offered by Gordon Childe were meant to understand urbanization of the bronze age cultures of the ancient period. However, the traits enumerated by him were not acceptable to all the scholars who maintained that it was a mixed bag of characteristics. He had termed the emergence of cities as ‘urban revolution’, to which many scholars such as Sjoberg (1960), Mumford (1961), Robert McAdams (1966), Glyn Daniel, objected. The term ‘urban revolution’ suggested some kind of suddenness. In the opinion of Childe ‘.... The word ‘revolution’ must not of course be taken as denoting a sudden, violent catastrophe, it is here used as for the culmination of progressive change in the economic structure and social organization...’ (Tripathi 2008, 138).

There is a debate among scholars about the factors and conditions which facilitate the rise of urban centers. Sjoberg (1960) attributed a large role to the political factor in the establishment of cities. In his opinion ‘large scale economic enterprise is highly dependent on an effective power structure Nowhere do cities, even commercial ones, flourish without direct or indirect support of a well-established state system’. Similarly, Mumford believed ‘the most important agent in effecting the change from a decentralized village economy to a highly organised urban economy was the king or rather, the institution of kingship’. Robert McC.

Adams (1966) maintained that the transformation at the core of the urbanization lay in the realm of social organization... For the most part, changes in social institutions precipitated changes in technology, subsistence, and other aspects of the wider cultural realm, rather than vice versa. G.Erdosy believed that the crucial indicator for the rise of urban centers lies 'in the development of a hierarchy of settlement types on a regional scale' and therefore regards the 'socio-cultural transformations accompanying the rise of cities as the central issue'. W. Chrystaller placed a good agricultural land with a network of rivers at the hub of his center place theory on urbanization. The first order centers have rich, extensive, fertile alluvial plains around which there are found satellite settlements engaged in cultivation of a variety of crops and commodities. The third order centers are located slightly further away. These are resource zones of minerals and provide access to other requirements. A.Ghosh (1973) was of the view that kingship itself, a political system, was the result of an economic system that had developed in the early days of the Bronze age. The technological and economic background that made it possible must be given due consideration. In his opinion no city, in a non-totalitarian state can live without a supporting merchant class (Tripathi 2008, 156).

6.4 Early Historic Settlements in North Karnataka

Emergence of urbanization in North Karnataka has been deliberated upon in the following sections with reference to early historic settlements having Asokan edicts and with respect to other settlements which have given evidence for occupation from the Mauryan and the Satavahana period. Out of the ten sites visited by the author nine had Asokan edicts inscribed in third century BC. It is quite striking that these inscriptions are found distributed in a small area close to each other. The concentration of Asokan inscriptions in North Karnataka,

specially as compared to the adjoining states of Andhra Pradesh and Maharashtra is notable.

6.4.1 North Maidan - Early historic culture appears to have truly flourished in North Maidan as indicated by major settlements such as Maski, Sannati as well as a large number of explored sites. These sites have yielded typical early historic assemblage, specially pottery. It is a plateau covered with rich black cotton soil. The general elevation is about 600 m with broad flat bottomed valleys ranging upto 400 m. Southern half of the area lies on Peninsular gneiss with NNW-SSE belts of Dharwar schists. To the north of Dharwar and Peninsular gneisses, sedimentary rocks such as sandstone, limestone and mudstone of Cuddapah formations are found in a continuous line in the west and Kurnool formations in the east. The remaining area is capped with Deccan trap (Singh 1971,817). The region is rich in economically viable rocks and minerals. These include granites, sandstone, shale, limestone, agate, opal, chalcedony, chert, laterite, haematite, limonite, gold, copper, quartz, crystal, quartzites, mica, ochre, soapstone, gneisses, dyke rocks, etc. In this context it is noteworthy that many ancient workings have been found. Old iron workings have been recorded at Somalingadhalli, near Machnur, near Mandargi, Chikhesrur and Hirehesrur. Perhaps the most prominent are the old gold workings which have been located in the Dharwars along the eastern margin of the belt from Mavinmatti to the north of Kardhalli, at “Makan-gavi” south of Mavinmatti and north east of Janapur. Perhaps the best known ancient gold workings have been located at Hutti gold mines situated in the Maski band of Dharwar schist rocks. The region is not only well provided in minerals but also has a strong agricultural base. The level plains with fertile soils are highly suitable for agriculture. The climate is hot and dry with occasional droughts due to variable rainfall but agriculture does not suffer because of the rivers such as Krishna,

Bhima, Tungabhadra and their tributaries. These rivers must have facilitated transport and communication and also encouraged internal trade. They may have also helped in exchange of ideas. Incidentally, both Sannati and Maski are located on the banks of river Bhima and close to Maski nullah (a tributary of Tungabhadra) respectively.

6.4.1.1 Maski - Maski appears to have been a major settlement of the period located in mineral rich zone. Thirteen gold workings have been discovered near Maski. It has been suggested that Maski itself could be the Suvarnagiri (“gold hill”) headquarters from which the Minor Rock Edicts of Asoka were issued. As there are several Asokan inscriptions in that area such as those at Gavimath and Palakigundu, near Kopbal, the Suvarnagiri headquarters may have been at one of these places. The large number of Asokan inscriptions in this part and the effort to introduce new cultural elements, as indicated by the Minor Rock Edicts, were perhaps deliberate and could be due to the region’s high commercial and mining value (Begley 1986, 301).

An important feature of Maski which is common to the other major settlements of the period is well made and sophisticated ware, particularly the Russet coated kaolin painted ware. From the abundance of pottery found it seems that Maski must have been well populated. The discovery of Rouletted ware is indicative of possible Roman contact. So far no brick structures have been found but stray brick bats suggest that permanent structures might have been in existence. The ornaments recovered show popularity of shell. It is interesting that a large number of beads have been recovered however like at Brahmagiri there is no evidence for local production. In such a situation beads may have been supplied by a nearby settlement which specialised in their production. For instance, Devargonal has given evidence of remains of furnaces for making beads (*I.A.R.*, 1974-75 18).

Infact, there is every possibility that many of the basic requirements were being met by the surrounding villages. Rich pottery, large number of ornaments and fine terracottas give indications that Maski was a flourishing settlement of the period. It appears to have been an important Mauryan center which continued to exist till the early centuries of Christian era.

The Asokan inscription at Maski, Minor Rock Edict is located at a foothill. The inscription is engraved on a single rock. As observed during a field visit in October 2012 the inscription was in a fairly good condition though some of the letters are missing. It has been inscribed in Prakrit language and Brahmi script. The inscription at Palkigundu is found on a hill. The inscription here is a Minor Rock Edict. At Gavimath there is a climb of about fifty meters before the inscription is reached. It is available on a massive boulder and seems to have a natural canopy. A Minor Rock Edict has been found here.

6.4.1.2 Sannati - Sannati appears to have been a prosperous settlement of the period, the prosperity reflecting itself in ways more than one. Perhaps the most notable manifestation of development were the structures. Stupas, chaityas, *Ayaka* pillars have been exposed. A striking feature of the structures found here is their Buddhist affiliation. Furthermore, many sculptured slabs and beautiful sculptures, frequently with Buddhist themes have been found. Religious movements such as Buddhism are known to have played a leading role in the development of typical religious architecture and sculptures (Allchin 1995, 339). This hypothesis is fully borne by the evidence from Sannati. Buddhism might have been introduced by the Mauryas whose inscriptions have been found but the much needed support which enabled Buddhism to strike roots and flourish was most probably local. A large number of inscriptions datable to second century CE are donative in character

(complete details of the inscriptions are given in the *Appendix*). They record the names of Buddhist devotees and donors comprising officials such as the minister and superintendent of records. These donations must have been crucial for the members of the monastic order who did not engage themselves directly in any productive activity. These donations would have also sustained, at least to some extent, Buddhist structures, sculptures and other paraphernalia. For instance, a meritorious gift of encasement of veneering slab was made by householder Tokhi from Mahiseka along with his wife, son, son-in-law, daughter-in-law, kinsmen and daughter during the 16th reign year of king Siri Chimuka Satavahana (corresponds to 36 BC as per the shorter chronology arrived by Ajay Mitra Shastri). Similarly, a gift of the uppermost (agatuka pata) and its line was made by the nun Dharmasri of the Kotujila family during the 35th reign year of king Vasisthiputra Sri Pulumavi along with her parents, all the preceptors, group of elders and the co-aestics for the well being and happiness of all beings/creatures (corresponds to 126 AD as per the shorter chronology) (Poonacha 2011, 443).

Perhaps it was the local level elite who provided the most crucial support at two levels i.e. they looked after the interests of the Buddhist monks and also mobilized resources needed for running the state apparatus. This elite must have derived its income from land and exploitation of mineral wealth as the region is both fertile and rich in minerals. There are a large number of explored sites in the region which might have been villages engaged in agricultural activity and producing surplus which was appropriated by the elite, who were probably the landowners. Proximity to the river Bhima and Satavahana coins suggest that there might have been an exchange network with other adjoining regions. Perhaps the sophisticated pottery including the Rouletted ware, beads of semi-precious stones and terracottas of fine workmanship were meant for these upper sections of the society. It is a possibility that the wealthier classes developed a sense of insecurity vis-a-vis the

surrounding areas and felt the compulsion to erect defensive structures like the fortification walls.

It appears that a reasonably big section of the population followed Buddhism as suggested by Buddhist structures and sculptures which show close resemblance with those recovered from the Buddhist sites at Amaravati, Bhattiprolu and Nagarjunakonda. The popularity of Buddhism however does not imply that Brahmanism completely receded into background. On the other hand there is enough evidence to show that it had its adherents. A label inscription in Brahmi characters was noticed on the limestone pillar of a *vihara* which refers to a son of minister who performed *yajnas* and is dated to first-second century CE. Fragmentary sculptural remains of a Yaksha were found with a neck ornament bearing Gaja-Lakshmi motif in the pendant. Thus, Sannati seems to have been a flourishing Buddhist settlement with rich and heterogeneous society. Satavahana inscriptions and coins suggest that Sannati came under the sway of Satavahana rule in the early centuries of the Christian era.

Kanaganahalli (Sannati) is the site of Maha-stupa, also referred to as adholokamaha-chaitya (the great Stupa of the netherworlds). As observed in the course of field-visit undertaken in 2012 remains of the stupa were strewn around and it seemed that they were arranged in such a manner as to resemble the original stupa. The stupa was built in limestone. Sculptured slabs which must have been part of the stupa were aligned in a circle in one corner. The slabs were engraved with several animals that included tiger, elephant, horse, deer, etc. It was interesting to see that many of the animal representations had wings. There was an unusual figure which had a human face but the body of a lion or a tiger and a pair of wings. Prof Sharada Srinivasan is of the view that these could be possibly the result of Hellenistic influences (personal communication). There were ornate slabs

with foot-prints (Buddha padas). An important discovery from Chandralamba temple but shifted to Kanaganahalli was that of Asokan inscriptions, Major Rock Edicts twelve and fourteen as well as Separate Rock Edicts One and Two. Perhaps the most amazing thing was the portrait of emperor Asoka. The portrait was executed on a huge slab of limestone which also had beautiful images of birds and flowers. The emperor looks very regal and appears to be surrounded by an entourage of female attendants. At the top of the panel emperor's name is mentioned. It was the gift of a gahapati Tondaka during the 16th reign year of Chimukha Satavahana. The panels with the images of the emperor also have very clear evidence for the worship of Buddhism in the form of foot-prints, peepul tree, etc. There were limestone slabs with lotus flower. The lotus flower is considered auspicious in Buddhism. Images of Buddha in different styles could be seen. He is shown as reclining, sitting cross-legged. In almost every image of Buddha there is an inscription. Buddha is shown on a seat which is ornamented with animals, yakshas, yakshis. Almost next to the main stupa were the brick structures which could have been votive stupas. There was another limestone slab which had scenes of procession with the main attraction being the elephant and the rider who could be a royal or an important person. Similarly, there was another slab which showed Buddhist chaitya and was otherwise ornamented with typical Buddhist themes such as Buddha-padas, peepul tree, etc. Another panel had a Naga being prominently displayed. The stupa was encircled by several ornamented pillars. One more panel showed a tree in a railing and deer underneath.

As per the information put up at the site of the Maha-stupa by the Archaeological Survey of India, the stupa measures nearly twenty two m in diameter at the railing and seventeen m in height. The stupa seems to have had three constructional

phases i.e. Maurya, Early Satavahana and later Satavahana datable from third century BC to third century CE.

6.4.2 South Maidan

6.4.2.1 Brahmagiri and Chandravalli - Brahmagiri and Chandravalli are in district Chitradurga which comes under the Krishna basin. The settlements at Brahmagiri and Chandravalli are close to Chinnahagari which is a major stream in the district originating in Holalkere taluk. It is a tributary of Tungabhadra. This proximity to Chinnahagari must have supported transport-communication and connected the settlements at Brahmagiri and Chandravalli with other adjoining parts in Karnataka and neighbouring Andhra Pradesh. District Chitradurga is a part of South Maidan and is marked by bare granitic boulders and hills. The region is characterized by relatively moderate climate with variation in rainfall and the area around Chitradurga is dry (Singh 1971, 819). The region is rich in mineral deposits and building material, particularly iron, gold, copper, manganese, garnet, diamonds, granite, limestone, soapstone, etc. Perhaps, it was the need to have access to these minerals, particularly gold and diamonds that attracted the Mauryas whose inscriptions have been found at Brahmagiri, Jatinga-Rameshwara, Siddapura.

Along with mineral exploitation commercial activity seems to have supported the region. At Chandravalli Roman coins which include two denarii of Augustus (23 BC-14 CE) and three of Tiberius (14 BC-37 CE) have been recovered along with Rouletted ware, Mediterranean amphora and a jar comparable to amphora in red ware. Similarly at Brahmagiri Rouletted ware has been found. This evidence taken collectively hints at contacts, possibly commercial, with the Roman world.

Trade with Roman world was at its peak in the early centuries of the Christian era. Furthermore, coins of Maharathis, Anandas and Satavahanas may have helped in internal exchange.

This prosperity is indicated by the nature of settlements at both Brahmagiri and Chandravalli. At Brahmagiri profuse pottery has been noted which suggests that the settlement was well populated. Furthermore, Asokan inscriptions have been found not only at Brahmagiri but also in the adjoining region of Bellary at Nittur and Udegolam. Inscriptions were probably put up by the Mauryan state at such strategic points where they would be accessible to large number of people. In other words, inscriptions also suggest that this region was well inhabited and visited by travelers. That these settlements were thriving in the early centuries of Christian era is manifested by the structures found, specially at Chandravalli. Permanent structures made of bricks such as houses, walls, floors and drain have been recorded. These structures may have belonged to the rich and the affluent. Fine pottery such as the Rouletted ware and the imported Mediterranean amphora might have been for the exclusive use of the rich. Ornaments like gold bangles at Brahmagiri and beads of semi-precious stones at both the settlements were perhaps meant for the upper sections of the society.

The settlements at Brahmagiri and Chandravalli lie in the same region and belong essentially to the same culture but both appear to have distinctive features. At Brahmagiri a small brick chaitya has been discovered which implies that a section of society was following Buddhism. In the Asokan inscriptions found at Brahmagiri and in the adjoining parts there is clear emphasis on Buddhist teaching and *dhamma*. In other words, evidence suggestive of the existence of Buddhism is more pronounced at Brahmagiri than at Chandravalli. At Chandravalli large number of Maharathi, Ananda, Satavahana and Roman coins have been recovered

along with Mediterranean amphora and a jar comparable to amphora in red ware, thereby indicating that Chandravalli was perhaps involved in trading activity and the trading class may have been an important and affluent section of the society. The trade could have been in minerals in which the region was notably rich. It is a possibility that the permanent structures recorded here belonged to the members of the trading community. Incidentally some of the coins of the period such as a Roman coin of Augustus and coins of Maharathi Sadakana kalalaya have been collected from these structures.

The inscription at Brahmagiri was located at the foothill. Minor Rock Edict One has been engraved here. As noticed during the field visit in 2012 entire inscription is on a single rock. It was apparently issued by the prince and the Mahamatras from Suvarnagiri and was meant for the Mahamatras posted at Isila (as per the translation of the edict available at the site). Isila probably referred to present day Brahmagiri. The inscription is in Prakrit language and Brahmi script. At Siddapura the inscription, like Brahmagiri is housed in a room. The inscription is on a single piece of rock. Some of the letters of the inscription are not there and as a result a part of the inscription has disappeared. Minor Rock Edict has been recorded here. At Jatinga-Rameshwara the inscription is found right at the top of the hill. Unfortunately, the inscription is not available in full detail and the letters are missing. The inscription found here is Minor Rock Edict One. At Nittur the Asokan inscription is under a roof which is supported by pillars. There is no enclosure for the inscription at this site. The inscription is engraved on a single rock. On closer inspection it becomes clear that like other inscriptions some of the inscribed letters are missing here too. Minor Rock Edict Two has been located here. There is another massive boulder which is some distance away. It is said that there is an inscription here but it is very difficult to see any letters on the rock.

At Udegolam, there were two massive rocks adjacent to each other. Both had a roof supported by pillars and both the rocks had inscriptions. The inscriptions found here are Minor Rock Edict One and Two which are in a better preserved condition as compared to the other inscriptions. It is interesting that the inscriptions here had continued from the front and right into the back of the rock. At Chandrvalli the early historic sites which have been discussed in the excavation reports seem to have been destroyed. However, the inscription of Kadamba ruler Mayurasarman is available.

6.4.3 Malnad - An important zone where early historic culture has been discovered lies in Malnad. A large number of settlements have been found spread across Belgaum, North and South Kanara and Shimoga. These sites have given rich evidence of pottery, sculptures, Roman coins and inscriptions. Particularly noteworthy are the structures, both secular and religious. The major early historic settlements in Malnad are Vadgaon-Madhavapur and Banavasi.

In this region climatic conditions are cool and rains are heavy. Rain is received both during south-west monsoon and north-east monsoon. The area is drained by a large number of rivers such as Netravati, Gurgur, Gongolli, Sitanadi, Swarnanadi, Tunga, Bhadra, Tungabhadra, Sharavati, Kumudvati and Varada. The area of Malnad is famous for the cultivation of crops like cashew, pepper, cardamom and cinnamon. Cool climate and heavy rains are to an extent responsible for thick forest cover. Forests are source of commercially valuable products such as Teak, Ebony, Bamboo, Sandalwood, etc. Resource base of the area is further strengthened by the availability of minerals which include quartzites, laterite, granite, shale, limestone, soapstone, gold, garnet and iron, among others. Favourable climate and availability of resources were major factors behind a

reasonably big population and over all prosperity which reflected itself not only in major settlements such as Vadgaon-Mahavapur and Banavasi but also in a large number of other sites of the region. Incidentally these sites have yielded not only typical pottery but also permanent brick structures, thereby indicating that these structures were not limited to a few settlements.

6.4.3.1 Vadgaon-Madhavapur - An important settlement in the area to give useful information about the period is Vadgaon-Madhavapur. A large number of coins comprising punch-marked coins, Satavahana lead, potin, copper coins, Kshatrpa coins and a Roman silver coin have been recorded. About thirty Roman denarii have been reported from district Belgaum where Vadgaon-Madhavapur is located. They have been attributed to Tiberius (Murthy 1996, 24). It seems that the settlement was deriving its sustenance to an extent from agriculture also. The baked brick circular granary hints at the availability of surplus produce which was in all probability appropriated by the land owning classes and stored. That Vadgaon-Madhavapur was a flourishing settlement, particularly from first to third century CE is attested by the large number of structures.

Structures consisting of rooms and halls were probably large houses meant for rich people like traders and landowners. Certain houses have verandahs suggestive of the preference of people for open and well ventilated houses. A storage bin was found in one of the rooms which was perhaps used for storing grain or some other essential commodity. Alongside permanent structures mud houses have been discovered (*I.A.R.* 1975-76, 19). These might have been the houses of the poor and lesser sections. Wells and cisterns have been discovered. These structures tend to suggest that Vadgaon-Madhavapur was well populated and people felt the compulsion to store water. Drain and sewage have come to light. An interesting

discovery was that of a street. An apsidal part of structure was noted. Brick platforms and rubble foundations have been recorded.

The social structure at Vadgaon-Madhavapur was not homogeneous but rather heterogeneous and stratified. This is made evident not only by structures of different levels existing close to each other but also by the ornaments, particularly beads. Beads made of semi-precious stones such as carnelian, lapis lazuli and crystal were probably for the use of rich while the lower classes had to be content with shell, terracotta and glass beads. People seem to have become proficient in terracotta making for most of the terracottas are very well modelled. The terracottas found include animal figurines such as caprisoned horse, elephant heads and human figurines that include a standing man with right hand probably in *abhaya-mudra* and upper garment running over the left shoulder, comparable to standing Buddha, hollow human head with protruberance on the top of the head, perhaps representing the Buddha in the western Deccan style.

6.4.3.2 Banavasi - Banavasi was a major early historic center and is important because of the Roman antiquities. Banavasi was a reputed trading station of the period and was mentioned in the works of classical writers. Ptolemy (150 CE) referred to it as Banaouasei. He also refers to Malippala which is identified with the coastal town of Malpe in South Kanara (Desai 1970, 42). Rome was interested in buying pepper. Malnad and South Kanara are known to grow pepper in large quantities (Murthy 1996, 20). It is interesting that though no Roman coin has been found a Roman coin mould was discovered. On the inner flat surface of the mould is carved the design and hence it can be called as one half of the mould and the other half is yet to be discovered. It is made of fine agate of black colour and has a groove at the top. It is circular and portrays a lady seated on a decorated stool.

She holds a sceptre in her right hand and a branch of olive in her left hand. The legend reads MAXIM. This is same as the reverse of the silver coin of Tiberius and Augustus. As the mould has a hook or loop above, it was possibly used as a pendant (Murthy 1996; 25, 27). It is a possibility that it was prepared to manufacture a coin for making a necklace as the top portion suggests. It could be a counterfeit prepared locally or a genuine mould brought from Rome (Murthy 1996, 61). Roman antiquities including Rouletted ware indicate that Banavasi had direct or indirect commercial relations with the Roman world. It is important to note that a hoard of Roman and Byzantine coins has been discovered at Akki Alur in district Dharwar. The coins belonged to Roman kings Septimus Severus (193-211 CE) and his son Caracalla (211-217 CE). Forty three coins have been attributed to early Byzantine kings Theodosius (402-450), Marcian (450-457), Leo 1 (457-474), Zeno (474-491), Anastasius (491-518) and Justin I (518-527). All the Byzantine coins of this hoard were minted at Constantinople. The coins are said to be fresh and seem to have no traces of any wear by circulation. This leads to a possibility that they were replicas meant for jewellery as most of them have two holes at the top (Murthy 1996; 23, 28). Coins of the Satavahanas and Anandas are a further indication of trading activity. In this context it is noteworthy that at Udayavara, in the same region as Banavasi was discovered a Siva temple and a citadel of the early historic period which hints at the possibility that the scene of action mentioned in the Greek farce with Kannada passages known as *Oxyrhynchus Papyri* was the ancient port of Udayavara (I.A.R 1968-69, 24). Thus, Banavasi emerges as an important exchange center of the period with traders as one of the prominent classes. It is a possibility that the brick structures which have been located belonged to them. Among the various interesting antiquities found is a soapstone bead mould. It suggests that beads were being manufactured locally. A large number of terracotta beads have been recorded along with beads of other

material. Particularly noteworthy are the broken glass beads with gold plating (Murthy 1996, 17). It appears that people of Banavasi were extremely fashionable and had a special fondness for ornaments. Though not many pieces of jewellery have come to light but the terracottas which are ornamented give indirect information. The jewellers appear to have been skilled for along with simple bangles they were now making elaborate necklaces, large ear rings, leg ornaments, etc. Terracottas recorded at Banavasi are indicative of good quality workmanship. These are mostly human figurines. Particularly noteworthy is a female figure made from a double mould. It has a dark red slip. The figure is standing but the legs below the knees are broken. She is portrayed as wearing a necklace, ear rings and plain bangles. The dress is shown in incised lines. Yet another terracotta has a fine head dress which is decorative. The art of sculpture making was well developed as indicated by images of Yakshas, Yakshis and Buddha.

According to the Asokan edicts Satiyaputa, Keralaputa, Chola, Pandya and Tambraparni were Asoka's neighbours. Of these, Satiyaputa corresponds with the South Kanara district (Desai 1970, 45). Two stupas have been discovered at Banavasi, not far from the river. The largest of the stupas had been built in two stages. The Mahavamsa maintains that Asoka sent a missionary to Banavasi and in the first century BC a contingent of monks from there came for the dedication of a stupa at Anuradhapura (Maloney 1976, 25). The fact that Asoka sent a Buddhist monk to Banavasi for the spread of Buddhism is supported by the foot-print slab inscription found at Nagarjunakonda (Desai 1970, 46). That people were familiar with Buddhism is indicated by terracottas and sculptures. At Vadgaon-Madhavapur was found the figure of a standing man with right hand probably in *abhaya-mudra* and upper garment running over the left shoulder. It is comparable to the standing Buddha. At the same site was found a finely executed hollow human head with protruberance on top of the head, perhaps presenting the Buddha

in the western Deccan style. At Togarsi was discovered a lamp-pillar with *Kubja Yaksha*, carrying lamp on the head, at the top and a panel of standing Buddha and his disciples in the middle of the pillar. It possibly belongs to second-third century CE. Two images of standing Buddha in round relief of second-third century CE were collected at Haigunda. It seems that along with Buddhism, Brahmanism also existed. At Vadgaon-Madhavapur a *yupa* inscription in Prakrit ascribable to first century CE was found. It mentions that a brahmin of Kasyapagotra performed two vedic sacrifices known as *Vajapeya* and *Agnistoma*. An inscription of third century CE was found at Vasana. Engraved on a limestone pillar the inscription is in Brahmi characters and Prakrit language. It records the making of (ka) tetti meaning a sculptured pillar bearing the inscription by a carpenter (*vadhaki*) for the (temple of) the god Chamdasiva Mahadeva, during the reign of the (Satavahana) king Vasithiputa Siri Pulumavi. It also indirectly indicates that donations were being made during this period. At Vadgaon-Madhavapur was found a fragment of a globular pot, having a moulded relief on the exterior, showing probably a seated two-handed Ganesa. Remains of Siva temples have been recorded at Niralagi and Udayavara. Hence, it seems that both Buddhism and Brahmanism enjoyed peaceful co-existence in the region in the early centuries of the Christina era.

It appears that people in this region felt an urgent need to protect themselves as defence structures have been discovered from more than one site. A moat and a citadel have been reported from Vadgaon-Madhavapur and Udyavara respectively. Banavasi was enclosed by a fortified wall. At Vadgaon-Madhavapur terracotta fragments of caparisoned horse have been found thereby hinting that people were familiar with this animal. Horses may have helped in warfare. This evidence is a confirmation of the prosperity that the region may have enjoyed necessitating protection. It also indicates that there must have been a ruling stratum or some

form of authority that took up the responsibility of defence and erected these huge structures.

6.5 Evidence for Urbanization

The developments in early historic period in Karnataka had reached a level where they could be characterised as *urban*. An important manifestation of urbanization is the city. Generally a city is understood as a socio-economic structure distinct from its rural surroundings and as pre-supposing an agrarian base of surplus production which was revolutionised from an earlier simple state because of the use of metal technology. The change from self-sufficing food production to an economy based on specialised manufacture and external trade would be among the essential prerequisites for urban growth. Other outward manifestations of urbanization include an increase in population, emergence of political and social system, the evidence of writing, monumental art, an increase in the knowledge of exact and predictive sciences and so on (Parasher 1991,19). Most of these features can be located in Karnataka in the early centuries of the Christian era. Urbanization in Karnataka was the result of a complex engagement of various factors--economic, social, political, religious and ecological. To have a proper understanding of this interaction it should be viewed in relation to the antecedent cultures. These cultures continue as 'non-urban' forms into the early historic period when urbanization had set-in.

6.5.1 Prelude to Urbanization - The large number of megalithic/iron age sites indicate growth of population which coincided with the spread of settlements from the highland peripheral areas to the fertile deltaic plains and with the transformation from a pastoral-cum-subsistence economy to a primarily agrarian

one. Demographic expansion necessitated increased use of such land which was capable of giving a higher surplus-yielding crop such as paddy. Thus, by the end of the proto-historic period certain developments seem to have taken place. These include an increase in population, a shift to the fertile plains, establishment of an agrarian economy based on paddy cultivation, rudimentary craft specialization, a developing exchange network, a degree of social differentiation and the emergence of spheres of political influence.

6.5.2 Mauryan expansion in North Karnataka – By the end of first millennium BC there was definite increase in the construction of large structures in South India and this development is clearly influenced by the political and ideological developments in Northern India (Bauer, Johansen and Bauer 2007, 14). In South Asia cities appeared for the first time in the third millennium BC and disappeared only to emerge once again almost a thousand years later in the Gangetic plain. This is better known as “second urbanization” which was largely restricted to North India and which clearly preceded the establishment of cities and complex political organization in Deccan and South India. Settlements in Deccan have given indisputable evidence for contacts with states, empires and religious institutions of the north. By about 600 BC certain common material elements could be identified in the Gangetic plains. These included an increasingly common use of iron, beginning of cast copper and punch-marked silver coins, use of baked brick, appearance of cities and construction of huge defensive structures around many cities. During this period a distinctive pottery, the Northern black polished ware (NBPW) besides the Painted grey ware (PGW) was being used. It is interesting to note that the NBPW is associated largely with the Gangetic sites though bits and pieces have been found more widely distributed. It was around

600 BC that heterodox religions such as Buddhism got institutionalized. A notable development in the Gangetic plain was that Mahajanapadas were established from eighth to sixth centuries BC. The Mahajanapada of Magadha was expanded at the cost of other Mahajanapadas between the sixth and fourth centuries BC and has been regarded as an empire. The Mauryan polity may be considered as the first major empire in the sub-continent. The Mauryan empire was spread across nearly all of northern India and the Deccan. It is a possibility that the imperial control may not have been very strong and equally effective through the empire (Morrison 1995;204, 206).

Asoka had both Major and Minor rock edicts in the area of Deccan. The Raichur Doab and its peripheral zones constituted an important corridor of communication between Northern Deccan and the rich hinterland of far South. It seems that Asoka was familiar with the geo-political importance of the area. The Raichur Doab and the peripheral area was rich in agriculture as well as mineral wealth. *Arthashastra* of Kautilya refers to *Dakshinapatha* and its diamond and gold mines, pearls and conch fisheries and numerous opulent marts. Traces of old workings of gold have been located at Hutti, Maski, Cuddapah and Kurnool districts. Rich deposits of iron have been found between Krishna and Tungabhadra rivers and precious stones were available in abundance in the alluvium of river Krishna (Poonacha 2011, 615-616). The mineral wealth of the Deccan must have been of vital significance for the economy and defence of the Mauryan empire. The trade relations promoted the penetration of Buddhism in Deccan including Karnataka. This penetration was accompanied by the growth of related architecture (Poonacha 2011, 617).

The discovery of a stele with major and separate rock edicts of Asoka at Sannati and sculptural representation of Asoka showing him as spreading Buddhism by the Satavahanas is strongly indicative of the presence of Mauryas in this region. A

granite stone with typical Mauryan polish and bricks measuring 54x27x9 and 47x24x08 cm was collected at *Ranamandala* in the course of explorations. Excavations at *Ranamandala* resulted in the discovery of fragmentary ivory pieces of a *chhatra*, finial and a circular *vedi bandha* of a miniature *stupa* forming part of votive offerings and a few terracotta figurines. Some sherds of NBPW and a circular medallion (disc stone) having the relief of standing mother goddesses flanked by palm trees and various animals with Mauryan affinity, were collected. Further, a distinct layer of the Mauryan period brought to light polished stone mullers, pounders, stone block, beads on terracotta and semiprecious stones, arrow heads and points on ivory along with red and black slipped ware. In the first phase, the fort was built by cutting a moat and heaping the earth to the requisite height as a wall. This first phase has been attributed to the Mauryan period (Poonacha 2011, 162). It is a possibility that the earliest phase of the structural activity of the stupa belonged to the Mauryan period. The earliest phase of the structural activity of the stupa is represented by a simple earthen tumulus raised by piling up alternate layers of medium to small size boulders, pebbles and limestone blocks and black cotton soil around a pit of loose ashy soil which was enclosed by limestone masonry wall set in mud mortar. This is suggestive of some kind of sepulchral or funerary affinity. The basal diameter of the earthen mound was 16 m which rose to a height of 7.5 m and was perhaps surmounted by a simple umbrella set in a railing of perishable material. The wall surrounding the tumulus is extant upto a height of 1 m in seven courses with a uniform width of 1.96 m. It is a possibility that this wall served as a low drum or base for the object of worship besides holding the form of the tumuli in position (Poonacha 2011, 162-163). The pre-Satavahana levels at the stupa is confirmed by the presence of a solitary NBPW sherd and a silver punch-marked coin. A mutilated polished sandstone sculpture of a lion capital was found at the stupa site at west. In spite of the

mutilation, it showed some resemblance with the lion capital from Bharhut. It is a possibility that the lion was positioned over a massive pillar and oriented towards the fortified habitation of Sannati. The sculpture was made with coarse grained sandstone which is not available in the area. The lion is extant till the shoulders with the head and body completely mutilated. It has four rows of tufts in its mane. Unlike the sculpture from Bharhut, the neck of the lion at Kanaganahalli is short and stout. It also shows typical shine and luster derived by polishing (Poonacha 2011, 163). One of the lower drum veneerings of southern *ayaka* and an upper drum veneer which encase the stupa shows the figure of lion capital (Poonacha 2011;163, 165). In the opinion of K.V.Ramesh and I.K.Sarma Sannati could have been an important fortified town and southern regional headquarters of the Mauryan empire. The discovery of major rock edicts and the identification of Mauryan level in the excavation of the stupa at Kanaganahalli, Ranamandala and the earthen rampart at Sannati give strong indications of Mauryan presence in and around Sannati (Poonacha 2011, 617).

The efforts of Asoka in the spread of Buddhism have been acknowledged in his sculptural representation in the upper drum of the stupa which has been labeled as *Raya Asoka*. The Ramagrama stupa was depicted at this chaitya on two drum slabs and on the pilaster of an ornate lower drum slab. One of the veneered sculptures of the lower drum also shows a Naga entwined stupa being adored by a king who could be the Mauryan emperor himself (Poonacha 2011, 165). According to the Ceylonese chronicle *Mahavamsa*, the third Buddhist Council (*Maha-sanghiti*) was held in 250 BC at Pataliputra under his patronage and under the chairmanship of Moggaliputta Tissa. After the council, several missionaries were sent to propagate Dharma to different regions. Five missionaries Mulakadeva, Sahadeva, Kassapagotta and Majjhima (Madhyama) were sent to the Himalayan region under

the leadership of Dundubhissara (Dundubhisvara). All these teachers are depicted in six registers of three panels respectively followed by the panel of Mauryan king Asoka. All these panels were the gifts of a *gahapati* Tondaka during the sixteenth reign year of Chhimukha Satavahana (Poonacha 2011, 284).

The Mauryas expanded into Karnataka and this lateral spread could have been inspired by the availability of natural resources. The imperial Mauryas and later the Satavahanas seem to have played a crucial role in accelerating the process of urbanization in North Karnataka. The outside powers needed resources to support the ruling classes, non-producing urban groups, the bureaucracy and the armed forces. These states usually did not have enough resources to meet the ever growing demands of the ruling classes and their subjects. Territorial annexation was generally undertaken to strengthen the resource base. This territorial expansion was normally sought in the raw material producing areas, the trade routes, exchange centers, fertile tracts and areas with high population concentration. The region of Deccan was extremely appealing. According to the Arthashastra of Kautilya, the southern trade route leading to areas producing an abundance of conch shells, diamonds, rubies, pearls and gold was profitable. This route passed through areas having mines. In this context, it is important to note that the provincial capital of the Mauryas was at Suvarnagiri (“gold mountain”) situated in the gold-rich Mysore area. There are six Asokan Rock Edicts in the vicinity of the ancient gold mines (Seneviratne 1981, 60-61). The provincial headquarters with viceroys, who were normally princes of royal blood i.e. the *Kumaras* and the *aryaputras*, were established to exercise control over such areas and extract their resources. Infact, a section of the Mauryan bureaucracy, comprising of *mahamatras*, *rajukas*, *pradesikas* and the *dhammamahamattas* were duty bound to conduct periodic tours. It is difficult to comprehend the extent of

Mauryan authority in Karnataka. Though the archaeological evidence concerning the Mauryas is relatively limited but their inscriptions are indicative of their presence. It seems that Asoka depended upon different measures to ensure peace on which the productivity and utility of the area depended. It is against this background that the introduction of Buddhism in Karnataka should be understood. Buddhism stressed on duties, obligations and various such moral teachings. Some of the other measures adopted by Asoka were - the royal tours, the erection of edicts in uniform script and language, the creation of the bureaucratic apparatus along with the office of the dhammamahamattas (Seneviratne 1981, 62).

The main interest of the Mauryas was apparently with extraction of revenue and not with creation of new resource bases or restructuring of the existing ones. Hence, it is possible that organization of labour as it existed in the megalithic period was adapted to satisfy imperial demands. It appears that Mauryas had limited resources and insufficient manpower which compelled them to create a “chain of command” in which the local chiefs played a crucial role. Infact, these chiefs served as vital links for they appropriated the surplus from the local producers and sent it across to the metropolis through the provincial governments and commercial channels. These chiefs seem to have enjoyed a semi-autonomous status in return for “homage and tribute” to the Mauryas. In other words, chiefs who were already in control of certain “pockets” came to be associated with the provincial government of the Mauryas. The administration of the Mauryas was primarily supervisory and was exclusively limited to the upper levels. However, the Mauryan rule was productive in the long run for the establishment of provincial government and the association of the local chieftains in the subordinate position led to the rise of a better defined ruling elite soon after the withdrawal of the Mauryas (Seneviratne 1981, 63). There is no denying that Mauryan spread into

Karnataka encouraged developments and perhaps introduced certain novel features such as Brahmi script, currency, etc. The impetus provided by the Mauryas became truly effective because of the definite structural changes in the preceding phase which enabled the society to absorb new ideas. Under the Mauryas and later the Satavahanas the local level elite developed a familiarity with the state machinery which was needed to exercise control over resources and subjects. Another external factor which strengthened the hands of the ruling elite was the Roman trade. Roman trade was flourishing in the early centuries of the Christian era and was responsible to an extent for the wealth and prosperity of settlements, notably in coastal areas such as Banavasi in North Kanara. Early Byzantine gold coins were found at Akki Alur in district Dharwar. Along with these coins three coins of the early Roman kings were discovered. The coins of the early Byzantine kings belong to the fifth and sixth century CE and thus this hoard extends the chronological horizon of Roman activity in Karnataka up to sixth century CE (Murthy 1996, 23).

6.6 Urban settlements in the Ganga plain and the Deccan – a comparative analysis with respect to North Karnataka

The Middle Ganga plain is spread across three hundred kilometers from the Himalayan foothills in the north and Vindhyan ranges in the south. The entire area is drained by the Ganga system. Most of the left hand tributaries of the Ganga have their source in the Himalayas and are therefore perennial. The right hand tributaries rise in the plateaus and are seasonal. The region has one of the richest soil covers in the world with adequate annual rainfall which makes it suitable for agriculture. Agriculture had started around 2000 BC and farmers were perhaps producing two crops in one year which included rice wheat, barley, and a variety

of pulses, millets, etc. This helped in the production of surplus which was required for the non-food producing groups. The usage of metals, specially iron further helped in the development of settlements. Further impetus for the establishment of urban centers was provided by the nascent beginnings of the political classes. The region is first mentioned in the Satapatha Brahmana, a text that is concerned with the spread of the Aryan culture. By the later Vedic period the Middle Ganga plain had become an important administrative unit because of the establishment of Kosala and Videha kingdoms. The major settlements which were established by about sixth century BC in the Middle Ganga plain have been discussed in the following section.

6.6.1 Settlements in the Middle Ganga Plain

6.6.1.1 Kausambi – The capital of the Vatsas, Kausambi has been identified with the extensive ruins, spreading over an area of eight square miles at Kosam, on the left bank of Yamuna. A massive fortification wall was built and repaired in five stages. It rises to a height of about 35 ft from the level of the surrounding plain. It was built originally of mud but had a revetment of burnt bricks on the outside. A moat of varying width encircled the rampart. There was a reservoir with a 3.96 m high bank on the south. Among the interesting discoveries made here were a 16 ft wide road, a palace occupying an area of 315 by 150 m and many monasteries.

6.6.1.2 Sravasti – On the basis of excavated finds, particularly pottery six distinct phases have been identified. These are BRW phase (eighth to seventh century BC), early NBPW phase (sixth to fourth century BC), late NBPW phase (third to first century BC), Kushana phase (first to third century CE), Gupta phase (fourth to

sixth century CE), post-Gupta phase (seventh to tenth century CE). There was an expansion of habitation particularly in phase two which coincided with the beginning of city. The development of city continued in phase three with the construction of structures such as the rampart which segregated the area of city from outside. Sravasti was the capital of ancient Kosala. The remains consist of two distinct units namely Saheth, the Buddhist establishment and Maheth to its north-east, a fortified city separated from each other by a low-lying land, probably an ancient bed of the Rapti on the banks of which Sravasti was situated. Buddha's disciple Sudatta Anathapindika established a monastery here, the Jetavana-vihara for the residence of Buddha and this became the nucleus of the Buddhist establishment. Mauryan emperor Asoka is said to have put up two capital pillars near the east gate of the Jetvana-vihara. In the course of excavations many stupas, monasteries and temples have been recorded at Saheth. The earliest of them can be dated to the Kushana period. Maheth, the city-site with a crescentic rampart and a circuit of nearly 5 km and a height of 18 m lies about 1 km to the south of Rapti. A fortification wall built of bricks was found. Houses in the habitational area were built of reused burnt bricks and ring-wells were provided as part of civic amenities. The archaeological assemblage comprised of pottery, iron weapons and implements, inscribed sealing, beads, uninscribed copper and punch-marked coins, etc. Inscriptional evidence suggests contacts between Sravasti and other contemporary towns such as Mathura and Saketa. For instance, an inscribed image of Buddha was recovered. The characters of the inscription compared well with the inscription from Mathura which has been dated to the beginning of the Christian era.

6.6.1.3 Ganwaria-Piprahwa

Ganwaria and Piprahwa are the city and stupa sites of the ancient Kapilavastu in the Basti district of eastern U.P. A steatite casket was found which according to Buhler carries the relics of Buddha himself and in the opinion of Fleet those of the kinsmen of Buddha. The archaeological relics of Piprahwa comprise of three major monasteries, two shrines, a public hall, a votive stupa and the main relic stupa which was originally erected by the Sakyas over the corporeal relics of the Buddha. The contemporary town site was located at Ganwaria, near the stupa site. The town site measured 300 m (north-south) and 270 m (east-west) and is spread over an area of eight hectares. The seven meter thick occupational deposit has been divided into four periods, namely pre-NBPW, NBPW, Sunga and Kushana. Piprahwa was occupied from fifth century BC to third century CE. The antiquities found here include fragments of NBPW, copper bowls, stone weight, iron pan, hook, nail and sockets, copper Kushana coins, punch-marked coins both in copper and silver, copper antimony rod and a borer, beads made on stone, terracotta and carnelian, a terracotta mask, etc.

6.6.1.4 Rajghat – The Mahajanapada of Kashi had its capital at Varanasi which has been identified with Rajghat, located on the west bank of the Ganga near its confluence with Varuna. The occupation at this site can be dated from 800 BC to 1700 CE. A rampart rising to a height of about 10 m was found. It has been dated to the NBPW phase. Other typical urban traits identified include extensive use of burnt bricks for structures, sanitary arrangements (ring wells) and the art of writing. Antiquities which may be dated to the period from 800 BC to 600 BC consist of sherds of black slipped ware, black-and-red ware, dull red ware, grey ware and red ware. In the period ranging from 600 BC to 400 BC a large quantity of NBPW was found. Other finds of this period consisted of beads of terracotta,

terracotta animal figurines and discs and counters, etc. There is evidence for the use of iron. Around the beginning of the Christian era there was a definite increase in structural activities. Two rooms, a door sill, a door sill, a bath and a well were found. One of the interesting finds was four hundred terracotta seals and sealings palaeographically datable to first and second centuries CE. The other material assemblage included terracotta figurines, terracotta discs and skin rubbers, balls of stone and terracotta, antimony rods, bangles of shell, glass and potter's stamps and spindle whorls.

6.6.1.5 Vaisali – Vaisali was the capital of the Lichchavi republic and a famous city in the time of Buddha and Mahavira. The city has been identified with Basrah village near Hajipur in north Bihar. According to the Buddhist and Jaina literature the buildings of Vaisali were gilded with gold, bronze and copper. At the ruins of Raja Visal Ka garh a palace and a secretariat were found together. They enclosed an area of 25 m north-south and 250 m east-west. In the course of excavation towers, roads, ditch and a fort built in two different phases of construction were found. Perhaps one of the most important structures was a clay stupa which had apparently undergone four brick enlargements. It is believed that this is relic stupa constructed by the Lichchavis. Another interesting structure was a tank which was supposed to have been a coronation tank of the Lichchavis. The other archaeological remains include NBPW, black ware, grey ware, red ware, terracotta human and animal figures including nagas, beads, pendants, seals and sealings, punch marked coins, etc.

6.6.1.6 Pataliputra – Remains of Pataliputra have been identified with Patna, situated on the left bank of the Ganges on its confluence with Son and Punpun

rivers. Megasthenes has given an account of the general size and administrative arrangement of the city. The notable structures found include a wooden palisade, an encircling moat and the Mauryan palace. A Buddhist monastery and an apsidal brick chaitya datable between 100 CE and 300 CE were recorded. Remains of wooden beams were found. A huge capital in the Hellenistic style was discovered. A ditch extending east-west up to 76 m was discovered alongside punch-marked coins, coins of Chandragupta –II and fragments of polished pillars. It seems that the site was inhabited from the Mauryan period up to 600 CE. The material remains recovered included coarse grey ware, red ware, cast and punch-marked coins datable to before 150 BC. In period two, ascribed to 150 BC to 100 CE antiquities found include Sunga terracottas, coins wall of bricks 30 cm square and remnants of an apsidal structure. The deposits belonging to 100 to 300 CE have yielded Kushana coins, terracotta human figurines, brick structures, remains of a monastic complex including the apsidal shrine with a stupa. An interesting discovery was a sealing which shows the plan of a monastery.

6.6.1.7 Champa – The ancient city of Champa is located 5 km west of Bhagalpur. Champa was the capital of Anga, one of the maha-janapadas annexed by Bimbisara of Magadha in the sixth century BC. According to Mahabharata, Champa stood at the confluence of the Ganga and the Champa. The city had a fortification wall, gates and was occupied till about twelve century CE. Excavation revealed remains of mud fortification made of rammed earth with brick revetment in the concluding phase of NBPW dated to second century BC. Black-and-red ware sherds from the lowest levels are indicative of the fact that pre-NBPW using people lived here. Several pieces of soapstone jewellery moulds were recorded in the early NBPW strata suggesting that a jeweller's art was quite developed. Excavations also

brought to light houses and drains made of bricks. An important discovery was a defensive fortification surrounded by a deep moat on the bed of Ganga. In period one the main pottery recovered was NBPW. The other material remains found included an ivory female figurine, copper ear ornaments, stone beads, etc. In the second phase a rampart wall along with a 3.80 m embankment of brick debris was found. The maximum height traced is 5.80 m. Sunga antiquities recovered comprised of miniature pots, cast copper and punch-marked coins, weapons such as bone arrowheads, socketed arrowheads, socketed iron spearheads and terracotta plaques. The second phase has been dated to 159-50 BC. An interesting structure belonging to this phase was a rammed brick floor with six post-holes which may have represented the provision of a watchman's room on the rampart.

6.6.1.8 Rajgir - Rajagriha was ensconced in a hill-valley about 45 miles south-east of Patna. It was in a strongly defensible position offering security. Furthermore, it lay close to mineral and raw material producing area of modern Bihar. It is believed that there are two cities at the site, namely old and new Rajagriha. Old Rajagriha lay completely within a valley surrounded by five hills on all sides. The valley has two rivulets, the Saravati and the Banganga. New Rajagriha was located in the level plain to the north of the hill-girth valley. A fortification wall was found which was approximately twenty five to thirty miles along the crest of the hills. The faces of the walls are built of massive undressed stones. The greater extant height of this wall is 3.35-3.65 m. Many bastions were observed. New Rajagriha also has two sets of fortifications. The outer fortification is an irregular pentagon in shape with a periphery of about three miles. The inner fortification encloses the citadel which is a roughly rectangular area of about seventy to eighty acres. The wall is 4.57-5.48 m thick and is preserved upto

a height of 3.35 m. Semi-circular bastions were found at regular intervals. Pottery found was NBPW.

6.6.1.9 Agiabir - This site is situated on the left bank of the Ganga, about 40 km upstream of Varanasi. The excavation has given evidence for a continuous sequence of cultures from about 1500 BC till the end of the Gupta period. Period III (NBPW period) has been dated from 600 BC to 200 BC. Remains of post-holes, ovens, rammed floors made of pot sherds were recorded. The main ceramics of the period were black slipped ware, NBPW, grey ware and red ware. Some of the other finds include beads of terracotta and semi-precious stones such as agate, carnelian, quartz, faience, etc; bone points, terracotta balls, copper and iron objects and terracotta discs. A cache of iron and copper objects was found. The copper objects included three vases with flaring rim, two *carinated* handis with featureless rims, one lid like object, one lota shaped vessel, one bowl with incurved rim, one miniature bowl and a mirror. The iron objects comprised of two swords with length of 69.5 and 64.5 cm respectively and a lamp-stand. Apparently no other NBPW site in India has yielded metal objects of these shapes comparable to Agiabir in quantity or quality. Furthermore, a hoard of three hundred faience beads was found. The recovery of a number of unfinished beads along with stone chips that they were being produced locally. Period IV belongs to the Sunga-Kushana times. Burnt bricks were used for constructing houses. A house complex consisting of eleven rooms with a courtyard and boundary wall was located. A votive tank of terracotta, a well of burnt bricks were other noteworthy structures. The other antiquities of the period include two copper coins, bone points, terracotta figurines, terracotta discs, ivory seal, sealings, antimony rods of copper and iron objects. It is a possibility that seals and sealings helped in exchange. In this

context it may be noted that Agiabir was located on the left bank of the Ganga, almost half way between Allahabad and Varanasi. As there were many early historical settlements, Agiabir may have participated in this riverine trade (Singh, 2010).

6.6.1.10 Sisupalgarh - An important early historic city towards the east is Sisupalgarh in Orissa. It was established in 300 BC and its defensive wall was built in the first quarter of the second century BC. The regular disposition of the gates, two each on each of the four sides of the wall it seems that the city was laid in a grid-pattern (Ghosh, 1973).

6.6.1.11 Amaravati – Amaravati was the site of ancient Dhanyakataka, a famous town in the Deccan and the capital of the later Satavahanas. It was in existence from second century BC till second-third century CE. It was a well-established Buddhist center. According to the inscriptions, the monastic establishment at Amaravati may have come into existence during the Mauryan period. The citadel was surrounded by a huge mud fortification. Soak-pits and drains were located. A navigational channel and a massive wharf were found. They had been fortified and embellished in the course of various structural phases. Rouletted ware and terra sigilata were the important pottery found. The antiquities found included a goldsmith's mould, glass bangles, ear rings, etc.

6.6.1.12 Nagarjunakonda - In South India, at the eastern edge of the Deccan plateau, an important site is Nagarjunakonda in the Krishna valley. It is surrounded by the off-shoots of the Nallamalai hills. It was the capital of the

Ikshvaku dynasty. Buddhist stupas, monasteries and shrines were found. Remains of a fortified citadel were identified on the summit of the Peddakundegutta hill. Near the eastern gateway were found some barracks, stables and a stone cistern. It seems that close to the western gateway were some ritualistic structures including a four-tiered stepped tank connected with drains and passages. Interestingly, animal bones (probably of horse and goat) outside the tank led it to being regarded as an ashvamedha tank. Not far were the remains of the structures which could have been the palace buildings. The residential area of the common people lay to the east of the citadel where the remains of streets, lanes and houses were found. An interesting discovery was the workshop of a goldsmith. A stadium-like complex associated with steps leading up to it on all sides and a pavilion to the west was an important discovery. A canal was located. Some of the other structures were a cremation ground, a stepped ghat, temples including a temple dedicated to God Kartikeya.

6.7 A comparative perspective – The early historic settlements in North Karnataka with respect to the urban centers in the middle Ganga plains and the Deccan come across as rich in material remains and permanent structures. The settlements were located close to rivers which would have helped in agriculture and production of surplus which was required for the sustenance of non-food producing urban groups such as the specialized craftsmen, the bureaucrats, the royalty, the armed forces, etc. The middle Ganga plain and the area of North Karnataka were fertile and were capable of producing the surplus. Further, rivers would have facilitated transport and communication as well as exchange of merchandise. In this context it is noteworthy that most of the major early historic settlements in North Karnataka were located close to rivers such as Sannati on the

Bhima, Maski on the Maski nullah (a tributary Tungabhadra), Brahmagiri and Chandravalli close to Chinnahagari, Banavasi close to Varada. Similarly, Kosambi was located on Yamuna, Rajghat and Agiabir on Ganga thereby testifying to the importance of being located on rivers.

There are some commonalities to these sites. The structures discovered comprised of permanent buildings mostly made of burnt bricks and set in mortar and these were certainly an advance over the wattle and daub structures. The permanent structures included residential houses, ring wells, reservoirs along side fortification walls, moat which would have provided protection from floods and attacks of the enemies. Some of the structures such as soakage pits, drains tend to suggest that people did have a sense of hygiene. Typical religious architecture was reflected by the stupas, monasteries which have been found at various settlements. The construction of nearly similar structures may be regarded as a tentative indication of exchange of ideas between the two regions. Furthermore, settlements around the beginning of the Christian era were rich in material remains including pottery, tools and implements, ornaments particularly beads, terracottas, sculptures, coins, inscriptions, etc. Bulk of the pottery was wheel made. The predominant ware in North Karnataka was the Russet coated kaolin ware whereas in the Gangetic plains it was the NBPW which was one of the deluxe wares of the period. Iron tools and implements were now in common usage as they were effective in agriculture which was becoming progressively more and more important. Iron weapons such as socketed arrowheads, socketed iron spearheads from Champa were indications of the use of iron in defence. Iron deposits were available close to the Ganga plains in Chota Nagpur plateau and also in Northern Karnataka as made evident by the old iron workings. Districts Bijapur, Raichur and Bellary in North Maidan are rich in iron ore deposits. The art of ornament making particularly beads was quite

advanced and was a reflection of the fact that people of this age were fashionable. Copper and silver coins were in vogue in the middle Ganga plains and copper, lead and potin coins of the Satavahanas, Maharathis, Anandas make it quite evident that currency was very much in regular use and there was a standardized medium of exchange which must have supported local trading activities. In this context, it is important to note that Roman coins may have been used in external trade. In the early centuries of Christian era the use of script had become widespread as manifested by the inscriptions that were in use in the administrative tasks, trading activity, religious donations, etc.

It would be appropriate to infer that the material culture of early historic period in North Karnataka was comparable in many ways to the settlements located in the Gangetic plain and Deccan. The beginning of urbanization was discernible from the size and location of the settlements, permanent structures, complex edifices, standardized system of exchange, writing, art and aesthetics. The settlement of Sannati in North Karnataka can be regarded as urban as it seems to have met most of the yardsticks of urbanization.

6.7.1 Urban characteristics at Sannati in a comparative light– Sannati was a settlement which was spread across almost eighty hectares and had a fortification wall nearly 2 km in length, 12-13 m wide at the base and 4-4.5 m at the top and rises to an average height of 6.5 m on the outer side and 3-4 m on the inner side. The fortification had three wide and massive entrances probably with bastions leading towards surrounding settlements at Benagutti in the north, the stupa at Anegutti on the north-northeast and eventually to the site of Mahastupa at Kanaganahalli. The fortification wall was raised further by using burnt bricks, limestone pebbles and gravel. The area enclosed by the fortification wall was

known as Ranamandala. It was apparently the residential area as made evident by the material remains recovered in the course of excavation. The site of Mahastupa was the nearby hamlet of Kanaganahalli. It was the north-eastern suburb of Sannati, at the nucleus of which was located the fortified township of Ranamandala and was surrounded by stupas and monasteries situated at Anegutti, Benagutti and Hasargundgi. Anegutti was the stupa site nearly 2 km northeast of Sannati village. Benagutti was a raised mound. Hasargundgi was located on the right bank of river Bhima. Excavation revealed a highly disturbed circular brick stupa enclosed by a limestone railing. The location of Sannati-Kanaganahalli, the surrounding settlements mostly with Buddhist remains seem to constitute a landscape which was expansive, had a strong hinterland and which may be regarded as urban.

The remains of the Mahastupa at Kanaganahalli, the sculptures and the donatory inscriptions establish Sannati as a reputed Buddhist center. The Mahastupa was richly embellished (except the dome) and these embellishments gave insights in the gradual progression from Hinayana into Mahayana philosophy. The sculptures executed on the lower drum slabs belong to the first phase of the early Satavahana period. In this phase Hinayana philosophy was predominant and Buddha was worshipped in symbolic forms such as vajrasana with pada, horse, stupa, dharmachakra in railing, vriksha chaitya, Buddhapada and triratna. Later the Mahayana philosophy was introduced and represented by the images of Buddha. A total of two hundred and seventy inscriptions were recorded at Kanaganahalli. Most of the inscriptions record the donations made towards the embellishment of the stupa in the form of slabs, umbrellas, flower receptacle and other architectural members. It is noteworthy that many of the donations were made by people who had come from other places such as Bhokardan, Dhanyakataka, Mahishaka, Kupana, Vakaticha, Pitalkhora, etc. Thus it appears that Sannati-Kanaganahalli

was a famous Buddhist center which not only had local following but attracted visitors from various places outside North Karnataka.

The Mahastupa was richly decorated with sculptural renderings. The themes depicted in the panels can be broadly classified into three categories 1) episodes narrating the events of the life of Buddha 2) select Jataka stories 3) portrait sculptures of Satavahana and other kings. Buddha and various aspects of his life find a prominent place among sculptural renderings. Buddha worship could be seen in the form of ornate, non-ornate stupa, lion, horse, vajrasana with pada, dharmachakra in railing, vriksha chaitya, buddhapada, triratna, jataka tales of the previous birth of Buddha and narratives from his life, all in the hinayana symbolic forms. Dharmachakra depictions in Buddhist art symbolize the setting of wheel of righteousness by the enlightened in the deer park of Sarnath. It is one of the dominant subjects represented at the stupa. The Mahayana phase of Buddhism is reflected by the seated and standing Buddha sculptures in Dharmachakra pravartana mudra. Particularly noteworthy are the two massive 2.40 m tall standing Buddha images over the southern and western ayaka platforms. The advent of Mahayana Buddhism and its canonical victory over Hinayana resulted in the sculptural depiction of the Buddha either in standing or seated posture. Images of Buddha came to be produced around second century CE as the Mathura and Gandhara schools of art began sculpting such images. A total of ten seated sculptures of Buddha have been recovered from the excavations at the Mahastupa complex. Labeled portrait relief sculptures of royal personalities included rulers of the Mahajanapada of Magadha, namely Mahagovinda and Udayana. Asoka has been represented twice. Along with the royalty and nobility common men also found a place.

6.8 Conclusion

Sannati seems to have been an established Buddhist center which was expansive and spread over a huge area encompassing the habitation, the area of pilgrimage and was surrounded by perhaps relatively small religious shrines which may have had some association with the Mahastupa at Kanaganahalli. It would be appropriate to conclude that Sannati and the surrounding settlements constituted an urban landscape which was at par with other early historic urban settlements in the Deccan and the middle Ganga plain in the North and was also perhaps the most renowned religious settlement in Karnataka.

CHAPTER SEVEN

7. Conclusion

7.1 Introduction: settlements in North Karnataka

In this chapter an effort has been made to integrate information drawn from the six major early historic settlements in Karnataka and the emerging trends and patterns suggestive of urbanization have been outlined. V Gordon Childe (1950) emphasized on a series of inter-connected social, economic, political and cultural changes which led to earliest states and cities, and these could be clearly distinguished from older or contemporary villages. It would be appropriate to infer that the major yardsticks of urbanization could be located at almost all the major early historic sites in Karnataka including Sannati, Maski, Brahmagiri, Chandravalli, Vadgaon-Madhavapur and Banavasi. All the six sites have given rich evidence for archaeological assemblage which would be normally associated with urban settlements. The urban settlements would interact with each other and this was in many ways responsible for contemporaneity of early historic culture. Furthermore, stupa sites like Kanaganahalli/Sannati were regularly visited by pilgrims from nearby early historic settlements such as Amaravati, thereby indicating that settlements were not isolated but on the contrary were very much a part of an urban milieu which got more consolidated with time.

7.2 Urbanization: significance of V Gordon Childe's criteria

Urbanization is a process whereby there is a complete transformation of social institutions and practices. The state or some form of ruling authority was established and the institutions of government and social divisions came into existence. As urbanization developed further, economic activity flourished and cities arose as an obvious manifestation of the process. The role of cities has been

to perform specialized functions in relation to a mostly agricultural and relatively undifferentiated hinterland. The establishment of a city is generally preceded by the production of a surplus of food and this is made possible by an improved technology and availability of irrigation. The surplus food helps in supporting the non-food producing classes such as the artisans, full-time specialists, clergy and the bureaucracy. According to V. Gordon Childe this kind of accumulation was “precondition for the growth of the village into a city.” In a city this surplus was limited to a small segment and this ultimately divided the society into classes (Ghosh 1973, 19). Urban institutions seem to have originated independently in different parts of the world. The areas in which independent civilizations originated appear to have been characterized by several specialized micro-environments for which different equally specialized subsistence sources were suitable. It is a possibility that to deal with this new level of complexity that writing was invented or further developed. This in turn promoted complexity and lent administrative complexity and continuity to urban institutions. The personnel and facilities of the urban institutions led to the further growth of the major settlements in which they were located (McCadams 1979, 21).

The issue of urbanization has been debated by several scholars over the years and there is no unanimity as such over the factor or factors that brought about urbanization. Sjoberg (1960) and Mumford (1961) attributed a large role to the political factor in the establishment of cities. In the opinion of Robert McC. Adams (1966) changes in social institutions leads to urbanization. G.Erdosy believed that the crucial indicator for the rise of urban centers lies ‘in the development of a hierarchy of settlement types on a regional scale’ and therefore regards the ‘socio-cultural transformations accompanying the rise of cities as the central issue’. A.Ghosh (1973) maintained that the political system was the result of an economic system and that no city in a non-totalitarian state can live without a

supporting merchant class. The factors responsible for the establishment of urban centers tend to vary from one region to another and every urban settlement has its own character and profile. In this context, V Gordon Childe's (1950) ten abstract criteria, all of which can be deduced from the archaeological data becomes quite relevant in understanding the benchmarks of urbanization.

7.3 Prelude to urbanization: the transition from megalithic to early historic

As per archaeological evidence the immediate phase preceding the early historic period in Karnataka is the megalithic culture phase which has been recorded over almost the whole state. The megalithic phase and the early historic phase are frequently found overlapping or the latter succeeding the former as borne out by some of the important excavated settlements such as Maski, Sannati, Brahmagiri and Chandravalli. The large number of megalithic sites indicate growth of population which coincided with the spread of settlements from the highland peripheral areas to the fertile deltaic plains and with the transformation from a pastoral-cum-subsistence economy to a primarily agrarian one. Demographic expansion necessitated increased use of such land which was capable of giving a higher surplus-yielding crop such as paddy. Thus, by the end of the megalithic period certain important developments seem to have taken place. These include a sizeable increase in population, a shift to the fertile plains, establishment of an agrarian economy based on paddy cultivation, rudimentary craft specialization, a developing exchange network, a degree of social differentiation and the emergence of spheres of political influence.

During the megalithic period some important developments had taken place but it would be inappropriate to conclude that the early historic culture in Karnataka evolved entirely and only out of the preceding megalithic phase, as it had certain

distinguishing traits of its own such as the use of the Russet-coated Painted Ware, the construction of large brick structures, the making of sculptures, coins of pre-Satavahana and Satavahana period, script and inscriptions. The early historic culture in Karnataka has been dated to the beginning of the Christian era by most of the excavators who have identified this culture (Murthy 1987-88, 1).

7.4 Role of ruling dynasties in early historic Karnataka

Early historic period in Karnataka witnessed the rule of various political dynasties. Some of the ruling houses such as Nandas, Mauryas and Satavahanas had their centers of power clearly outside Karnataka. These dynasties introduced new cultural traits which were adopted by the local communities in their day-to-day life. The outside powers seem to have played a crucial role in facilitating the transition from proto-historic to the early historic. This transition may have been the outcome of active interaction between metropolitan states and the region of Karnataka. The area of Deccan was extremely lucrative as it was rich in resources. According to the Arthashastra of Kautilya, the southern trade route leading to areas producing an abundance of conch shells, diamonds, rubies, pearls and gold was profitable. It is possible that the Mauryas and later the Satavahanas ventured into Karnataka looking for resources. The Mauryas established their provincial government in those areas which had potential for development. This resulted in an inward turn of the sphere of interest when the Mauryas retreated. Infact, the seats of Mauryan administration in Karnataka got established as centers of political power and after them Maharathis began to rule in the region of Karwar, Banavasi, Chitradurga and Chandravalli in about the second century B.C. A large number of lead coins of the Maharathis have been recovered from Chitradurga, Karwar, Aihole and Banavasi. The Maharathis were succeeded by the Anandas in the

Chitradurga-Banavasi area. Coins belonging to Anandas have been collected from Karwar, Chitradurga, Chandravalli and Banavasi. The emergence of this local elite seems to have taken place between second century B.C. and the middle of the first century B.C. (Chattopadhyaya 1987, 728-730). This process seems to have continued after the Satavahanas also and the emergence of the Kadambas of Banavasi in the post-Satavahana period may be regarded as a “local” indication of the continuity of the same process.

7.5 Complexity of material culture in early historic Karnataka

The major early historic sites in Karnataka are Sannati, Maski, Brahmagiri, Chandravalli, Vadgaon-Madhavapur and Banavasi. All the six sites have given evidence for rich material assemblage. Sannati (taluk Chittapura, district Gulbarga) is the principal site of which has been investigated. It is a Maurya-Satavahana settlement with some evidence for the megalithic age. Kanaganahalli and other adjacent sites such as Anegutti, Benagutti, Hasargundgi are well endowed with structural remains of Buddhist affiliation, particularly stupas. The Mahastupa at Kanaganahalli is richly embellished with sculptural representations many of which are stories from Jatakas, depictions of royalty including portrait of emperor Asoka, Dhamachakra, stupa and worship of relics, monastic complexes, Nagas, Yakshis, wheel of life (Bhavachakra), noblemen, retinue, vehicles and mounts, common men and servants, etc. There are many standing and seated images of Buddha. The sculptural art is immensely useful for understanding contemporary society and prevailing religious beliefs and practices. Inscriptions palaeographically datable from third century BC to second century CE in Brahmi characters and Prakrit language have been found. At Kanaganahalli alone two hundred and seventy inscriptions have been reported. Many of these inscriptions are donative and provide information about the social background of the donors

and places where they hailed from. Coins belonging to various Satavahana rulers have been recorded. They are helpful in establishing a chronological sequence. A notable feature of the structures found here is their Buddhist affiliation. Furthermore, many sculptured slabs and beautiful sculptures, frequently with Buddhist themes have been found. Religious movements such as Buddhism are known to have played a leading role in the development of typical religious architecture and sculptures (Allchin 1995, 339). This hypothesis is fully borne by the evidence from Sannati. Buddhism might have been introduced by the Mauryas whose inscriptions have been found but it was the local support which helped Buddhism to establish itself and have many adherents. A large number of inscriptions datable to second century A.D. are donative in character. They record the names of Buddhist devotees and donors including minister and officials such as superintendent of records. These donations must have been crucial for the members of the monastic order who did not engage themselves directly in any productive activity. These donations would have also supported, at least to some extent, Buddhist structures, sculptures and other paraphernalia. Perhaps it was the local level elite who provided the most crucial support at two levels i.e. they looked after the interests of the Buddhist monks and also mobilized resources required for running the state machinery. This elite must have derived its income from land and exploitation of mineral wealth as the region is suitable for agriculture and well endowed in minerals. There are a large number of explored sites in the region which may have been villages engaged in agricultural activity and producing surplus which was appropriated by the elite, who were perhaps the landowners. Proximity to the river Bhima and Satavahana coins suggest that there might have been an exchange network with other adjoining regions. Perhaps the sophisticated pottery including the Rouletted Ware, beads of semi-precious stones and terracottas of fine workmanship were made available for the wealthier sections

of the society. It is a possibility that the rich were desirous of protection and felt the compulsion to construct defensive structures like the fortification wall at Sannati.

The other important early historic settlement is Maski. It is located on Maski nullah (a tributary of Tungabhadra). Thirteen gold workings have been discovered near Maski. It has been suggested that Maski itself could be the Suvarnagiri (“gold hill”) headquarters from which the Minor Rock Edicts of Asoka were issued. As there are several Asokan inscriptions in that area such as those at Gavimath and Palakigundu, near Kopbal, the Suvarnagiri headquarters may have been at one of these places. The large number of Asokan inscriptions in this part and the effort to introduce new cultural elements, as indicated by the Minor Rock Edicts, were perhaps deliberate and could be due to the region’s high commercial and mining value (Begley 1986,301). Rich pottery, large number of ornaments and fine terracottas tend to suggest that Maski was a flourishing settlement of the period.

Brahmagiri and Chandravalli are located in Chitradurga. The region is known for its relatively moderate climate with variations in rainfall and the area around Chitradurga is dry (Singh 1971, 819). The region is rich in mineral deposits and building material, particularly iron, gold, copper, maganese, garnet, diamonds, granite, limestone, soapstone, etc. Perhaps, it was the desire to acquire these minerals, particularly gold and diamonds that attracted the Mauryas whose inscriptions have been found at Brahmagiri, Jatinga-Rameshwara, Siddapura. Along with mineral exploitation commercial exchange seems to have supported the region. At Chandravalli Roman coins which include two denarri of Augustus (23 BC-14 CE) and three of Tiberius (14 CE-37 CE) have been collected along with Rouletted Ware, Mediterranean amphora and a jar comparable to amphora in red ware. Similarly at Brahmagiri Rouletted Ware has been found. This evidence

taken collectively suggests contacts, possibly commercial, with the Roman world. Trade with Roman world was at its peak in the early centuries of the Christian era. Furthermore, coins of Maharathis, Anandas and Satavahanas may have helped in local trade. That these settlements were flourishing in the early centuries of Christian era is manifested by the structures found, specially at Chandravalli. Permanent structures made of bricks such as houses, walls, floors and drain have been recorded. These structures may have belonged to the rich and the affluent. Ornaments like gold bangles at Brahmagiri and beads of semi-precious stones at both the settlements were perhaps meant for the upper sections of the society.

Vadgaon-Madhavapur, Banavasi and the surrounding early historic sites are in the Malnad area. The area of Malnad is known for the cultivation of crops such as cashew, pepper, cardamom and cinnamon. Cool climate and heavy rains are to an extent responsible for thick vegetation. Resource base of the area is further augmented by the availability of minerals. Favourable climate and availability of resources were major factors responsible for big population and over all prosperity which reflected itself in major settlements such as Vadgaon-Mahavapur and Banavasi as well as large number of other sites of the region. At Vadgaon-Madhavapur a large number of coins including punch-marked coins, Satavahana lead, potin, copper coins, Kshatrapa coins and a Roman silver coin have been recovered. About thirty Roman denarii have been reported from district Belgaum where Vadgaon-Madhavapur is located. They have been attributed to Tiberius (Murthy 1996, 24). It seems that the settlement was being supported to an extent by agriculture also. The baked brick circular granary suggests the availability of surplus produce which was in all probability appropriated by the land owning classes and stored. That Vadgaon-Madhavapur was a flourishing settlement,

particularly from first to third century CE, is attested by the large number of structures.

Banavasi was a major early historic center and is important because of the Roman antiquities. Banavasi was a famous trading station of the period and was mentioned in the works of classical writers. Ptolemy (150 CE) referred to it as Banaouasei. He also refers to Malippala which has been identified with the coastal town of Malpe in South Kanara (Desai 1970, 42). Rome was interested in buying pepper. Malnad and South Kanara are known to grow pepper in large quantities (Murthy 1996, 20). Roman antiquities including Rouletted Ware suggest that Banavasi had direct or indirect commercial relations with the Roman world. It is important to note that a hoard of Roman and Byzantine coins has been found at Akki Alur in district Dharwar. Coins of the Satavahanas and Anandas are a further indication of trading activity. Banavasi seems to have been an important exchange center of the period with traders as one of the prominent classes. It is a possibility that the brick structures which have been located perhaps belonged to them. It seems that people in this region felt an urgent need to protect themselves as defence structures have been recorded at more than one site. A moat and a citadel have been reported from Vadgaon-Madhavapur and Udyavara respectively. Banavasi was enclosed by a fortified wall. At Vadgaon-Madhavapur terracotta fragments of caparisoned horse have been collected thereby suggesting that people were aware of this animal. Horses may have helped in warfare. This evidence is a confirmation of the prosperity that the region may have enjoyed necessitating protection. It also indicates that there may have been a ruling stratum or some form of authority that was responsible for defence and built these huge structures.

7.6 Mauryas and their contribution in the development of North Karnataka

In North India cities emerged during sixth century BC and this development preceded the establishment of cities and complex political organization in Deccan and South India. By about 600 BC certain common material elements could be clearly located in the Gangetic plains. These comprised of an increasingly common use of iron, beginning of cast copper and punch-marked silver coins, use of baked brick, appearance of cities and construction of huge defensive structures around many cities. During this period a distinctive pottery, the Northern black polished ware (NBPW) besides the Painted grey ware (PGW) was being used. It is interesting to note that the NBPW is associated largely with the Gangetic sites though bits and pieces have been found more widely distributed. It was around 600 BC that heterodox religions such as Buddhism got institutionalized. An important development in the Gangetic plain was that Mahajanapadas were established from eighth to sixth centuries BC. The Mahajanapada of Magadha grew at the cost of other Mahajanapadas between the sixth and fourth centuries BC and has been regarded as an empire. The Mauryan polity may be regarded as the first major empire in the sub-continent. The Mauryan empire was spread across nearly all of northern India and the Deccan (Morrison 1995; 204, 206). Asoka had both Major and Minor rock edicts in the area of Deccan. The Raichur Doab and its peripheral zones constituted an important corridor of communication between Northern Deccan and the rich hinterland of far South. It seems that Asoka was familiar with the geo-political importance of the area. The Raichur Doab and the surrounding area was rich in agriculture as well as mineral wealth. *Arthashastra* of Kautilya refers to *Dakshinapatha* and its diamond and gold mines, pearls and conch fisheries and several opulent marts. Traces of old workings of gold have been located at Hutti, Maski, Cuddapah and Kurnool districts. Rich deposits of iron have been found between Krishna and Tungabhadra rivers and precious stones were available in abundance in the alluvium of river Krishna (Poonacha 2011, 615-

616). The mineral wealth of the Deccan must have been important for the economy and defence of the Muryan empire. The trade relations paved the way for Buddhism in Deccan including Karnataka. This spread of Buddhism was accompanied by the growth of related architecture (Poonacha 2011, 617).

The discovery of a stele with major and separate rock edicts of Asoka at Sannati and sculptural representation of Asoka showing him as spreading Buddhism by the Satavahanas is strongly indicative of the presence of Mauryas in this region. A granite stone with typical Mauryan polish and bricks measuring 54x27x9 and 47x24x08 cm was collected at *Ranamandala* in the course of explorations. Excavations at *Ranamandala* resulted in the discovery of fragmentary ivory pieces of a *chhatra*, finial and a circular *vedi bandha* of a miniature *stupa* forming part of votive offerings and a few terracotta figurines. Some sherds of NBPW and a circular medallion (disc stone) having the relief of standing mother goddesses flanked by palm trees and various animals with Mauryan affinity, were collected. Further, a distinct layer of the Mauryan period brought to light polished stone mullers, pounders, stone block, beads on terracotta and semiprecious stones, arrow heads and points on ivory along with red and black slipped ware. In the first phase, the fort was built by cutting a moat and heaping the earth to the requisite height as a wall. This first phase has been dated to the Mauryan period (Poonacha 2011, 162). The possibility is there that the earliest phase of the structural activity of the stupa belonged to the Mauryan period. The pre-Satavahana levels at the stupa is confirmed by the presence of a solitary NBPW sherd and a silver punch-marked coin. A mutilated polished sandstone sculpture of a lion capital was found at the stupa site at west. In spite of the mutilation, it showed some similarity with the lion capital from Bharhut. It is a possibility that the lion was positioned over a massive pillar and oriented towards the fortified habitation of Sannati. The sculpture was made with coarse grained sandstone which is not available in the

area. The lion is extant till the shoulders with the head and body completely mutilated. It has four rows of tufts in its mane. Unlike the sculpture from Bharhut, the neck of the lion at Kanaganahalli is short and stout. It also shows typical shine and luster which is the result of polishing (Poonacha 2011, 163). According to K.V.Ramesh and I.K.Sarma Sannati could have been an important fortified town and southern regional headquarters of the Mauryan empire. The discovery of major rock edicts and the identification of Mauryan level in the excavation of the stupa at Kanaganahalli, Ranamandala and the earthen rampart at Sannati give strong indications of Mauryan presence in and around Sannati (Poonacha 2011, 617).

The efforts of Asoka in the spread of Buddhism have been acknowledged in his sculptural representation in the upper drum of the stupa which has been labeled as *Raya Asoka*. The Ramagrama stupa was depicted at this chaitya on two drum slabs and on the pilaster of an ornate lower drum slab. One of the veneered sculptures of the lower drum also shows a Naga entwined stupa being adored by a king who could be the Mauryan emperor himself (Poonacha 2011, 165). According to the Ceylonese chronicle *Mahavamsa*, the third Buddhist Council (*Maha-sanghiti*) was held in 250 BC at Pataliputra under his patronage and under the chairmanship of Moggaliputta Tissa. After the council, several missionaries were sent to propagate Dharma to different regions. Five missionaries Mulakadeva, Sahadeva, Kassapagotta and Majjhima (Madhyma) were sent to the Himalayan region under the leadership of Dundubhissara (Dundubhisvara). All these teachers are portrayed in six registers of three panels respectively followed by the panel of Mauryan king Asoka. All these panels were the gifts of a *gahapati* Tondaka during the sixteenth regnal year of Chhimukha Satavahana (Poonacha 2011, 284).

The Mauryas expanded into Karnataka and this lateral spread could have been motivated by the availability of natural resources. The imperial Mauryas and later the Satavahanas seem to have played a crucial role in accelerating the process of urbanization in North Karnataka. The outside powers required resources to support the ruling classes, non-producing urban groups, the bureaucracy and the armed forces. These states normally did not have enough resources to meet the ever growing demands of the ruling classes and their subjects. Territorial expansion was generally undertaken to strengthen the resource base. This territorial expansion was normally sought in the raw material producing areas, the trade routes, exchange centers, fertile tracts and areas with high population concentration. The region of Deccan was extremely appealing. According to the Arthashastra of Kautilya, the southern trade route leading to areas producing an abundance of conch shells, diamonds, rubies, pearls and gold was profitable. This route passed through areas having mines. In this context, it is important to note that the provincial capital of the Mauryas was at Suvarnagiri (“gold mountain”) situated in the gold-rich Mysore area. There are six Asokan Rock Edicts in the vicinity of the ancient gold mines (Seneviratne 1981, 60-61). The provincial headquarters with viceroys, who were normally princes of royal blood i.e. the *Kumaras* and the *aryaputras*, were established to exercise control over such areas and extract their resources. Infact, a section of the Mauryan bureaucracy, comprising of *mahamatras*, *rajukas*, *pradesikas* and the *dhammamahamattas* were duty bound to conduct periodic tours. It seems that Asoka depended upon different measures to ensure peace on which the productivity and utility of the area depended. It is against this background that the introduction of Buddhism in Karnataka should be understood. Buddhism stressed on duties, obligations and other such moral teachings. Some of the other measures adopted by Asoka were - the royal tours, the erection of edicts in uniform script and language, the creation

of the bureaucratic apparatus along with the office of the dhammamahamattas (Seneviratne 1981, 62).

The main interest of the Mauryas was apparently with extraction of revenue and not with creation of new resource bases or restructuring of the existing ones. Hence, it is possible that organization of labour as it existed in the megalithic period was adapted to satisfy imperial demands. It appears that Mauryas had limited resources and insufficient manpower which compelled them to create a “chain of command” in which the local chiefs played a crucial role. Infact, these chiefs served as vital links for they collected the surplus from the local producers and sent it across to the metropolis through the provincial governments and commercial channels. These chiefs seem to have enjoyed a semi-autonomous status in return for “homage and tribute” to the Mauryas. In other words, chiefs who were already in control of certain “pockets” came to be associated with the provincial government of the Mauryas. The administration of the Mauryas was primarily supervisory and was exclusively limited to the upper levels. However, the Mauryan rule was useful in the long run for the establishment of provincial government and the association of the local chieftains in the subordinate position led to the rise of a better defined ruling elite soon after the withdrawal of the Mauryas (Seneviratne 1981, 63). The Mauryan rule in Karnataka encouraged developments and perhaps introduced certain novel features such as Brahmi script, currency, etc. It would be appropriate to maintain that the impetus provided by the Mauryas became truly effective because of the definite structural changes in the preceding phase which enabled the society to assimilate new ideas and practices.

7.7 Satavahanas: beginning of urbanization and socio-cultural formations

The pattern of development which was initiated by the Mauryas continued under the Satavahanas. The legacy of the Mauryas in Karnataka was duly acknowledged by the Satavahanas. This is many ways reflected by the portrait of the Mauryan emperor Asoka executed in the upper drum of the stupa and labeled as *Raya Asoka*. This particular panel was a donation from gahapati Tondaka during the sixteenth reign year of Chhimukha Satavahana (Poonacha 2011, 284). It is interesting to note that donations were being made frequently by the local people as well as visitors from other places and incidentally many donors were from Amaravti. A closer examination of the inscriptions indicates that there was a sense of egalitarianism and common people were also contributing towards the maintenance of religious structures such as the Mahastupa. The construction and alteration of the Mahastupa spanning across many phases is a testimony of the active interest of the Satavahanas in promoting Buddhism in and around Sannati. The evidence for brick structures and other early historic material remains is much more prolific and varied in the Satavahana period. During the Mauryan and later the Satavahana rule the local level elite developed a familiarity with the state machinery which was needed to administer control over resources and subjects. Another external factor which strengthened the hands of the ruling elite was the Roman trade. Roman trade was flourishing in the early centuries of the Christian era and was responsible to an extent for the wealth and prosperity of settlements, particularly in coastal areas such as Banavasi in North Kanara. Early Byzantine gold coins were found at Akki Alur in district Dharwar. Along with these coins three coins of the early Roman kings were recorded. The coins of the early Byzantine kings belong to the fifth and sixth century CE and thus this hoard extends the chronology of Roman activity in Karnataka up to sixth century CE (Murthy 1996, 23).

7.8 Comparisons with urbanized middle Ganga plain and related Satavahana sites

The Middle Ganga plain is spread across three hundred kilometers from the Himalayan foothills in the north and Vindhyan ranges in the south. The entire area is drained by the Ganga system. The region has one of the richest soil covers in the world with adequate annual rainfall which makes it suitable for agriculture. Agriculture had started around 2000 BC and farmers were perhaps producing two crops in one year which included rice wheat, barley, and a variety of pulses, millets, etc. It seems that this led to the production of surplus which was required for the non-food producing groups. The usage of metals, specially iron further helped in the development of settlements. The impetus for the establishment of urban centers was provided by the nascent beginnings of the political classes. The region is first mentioned in the Satapatha Brahmana, a text that is concerned with the spread of the Aryan culture. By the later Vedic period the middle Ganga plain had become an important administrative unit because of the establishment of Kosala and Videha kingdoms. By about sixth century BC the middle Ganga plain witnessed the establishment of several towns and cities. Similarly in the early centuries of the Christian era settlements with urban characteristics were established at Sisupalgarh in the east, Amaravati and Nagarjunakonda in the Deccan.

The early historic settlements in North Karnataka with respect to the urban centers in the middle Ganga plains and the Deccan come across as rich in material remains and permanent structures. The settlements were located close to rivers which would have helped in agriculture and production of surplus which was required for the sustenance of non-food producing urban groups such as the specialized craftsmen, the bureaucrats, the royalty, the armed forces, etc. The middle Ganga

plain and the area of North Karnataka were fertile and were capable of producing the surplus. Further, rivers would have facilitated transport and communication as well as exchange of merchandise. In this context it is noteworthy that most of the major early historic settlements in North Karnataka were located close to rivers such as Sannati on the Bhima, Maski on the Maski nullah (a tributary of Tungabhadra), Brahmagiri and Chandravalli close to Chinnahagari, Banavasi next to Varada. Similarly, Kosambi was located on Yamuna, Rajghat and Agiabir on Ganga thereby confirming to the importance of being located on rivers.

There are some similarities in these sites. The structures discovered comprised of permanent buildings mostly made of burnt bricks and set in mortar and these were certainly an advance over the wattle and daub structures. The construction of nearly similar structures may be regarded as a tentative indication of exchange of ideas between the two regions. Furthermore, settlements around the beginning of the Christian era were rich in material remains including pottery, tools and implements, ornaments particularly beads, terracottas, sculptures, coins, inscriptions, etc. Bulk of the pottery was wheel made. The predominant ware in North Karnataka was the Russet coated kaolin ware whereas in the Gangetic plains it was the NBPW which was one of the deluxe wares of the period. Iron tools and implements were now in common usage as they were effective in agriculture which was becoming progressively more and more important. Iron weapons such as socketed arrowheads, socketed iron spearheads from Champa were indications of the use of iron in defence. Iron deposits were available close to the Ganga plains in Chota Nagpur plateau and also in Northern Karnataka as made evident by the old iron workings. Districts Bijapur, Raichur and Bellary in North Maidan are rich in iron ore deposits. The art of ornament making particularly beads was quite advanced and was a reflection of the fact that people of this age were fashionable.

Copper and silver coins were in vogue in the middle Ganga plains and copper, lead and potin coins of the Satavahanas, Maharathis, Anandas make it quite evident that currency was very much in regular use and there was a standardized medium of exchange which must have supported local trading activities. In this context, it is important to note that Roman coins may have been used in external trade. In the early centuries of Christian era the use of script had become widespread as manifested by the inscriptions that were in use in the administrative tasks, trading activity, religious donations, etc.

It would be appropriate to infer that the material culture of the early historic period in North Karnataka was comparable in many ways to the settlements located in the Gangetic plain and Deccan. The beginning of urbanization was discernible from the size and location of the settlements, permanent structures, complex edifices, standardized system of exchange, writing, art and aesthetics.

7.9 Aspects of urbanization at Sannati

Sannati was a settlement which was spread across almost eighty hectares and had a fortification wall. The fortification had three wide and massive entrances probably with bastions leading towards surrounding settlements at Benagutti in the north, the stupa at Anegutti on the north-northeast and eventually to the site of Mahastupa at Kanaganahalli. The area enclosed by the fortification wall was known as Ranamandala. It was apparently the residential area as made evident by the material remains recovered in the course of excavation. The site of Mahastupa was the nearby hamlet of Kanaganahalli. It was the north-eastern suburb of Sannati, at the nucleus of which was located the fortified township of Ranamandala and was surrounded by stupas and monasteries situated at Anegutti, Benagutti and Hasargundgi. Excavation revealed a highly disturbed circular brick stupa enclosed

by a limestone railing. The location of Sannati-Kanaganahalli, the surrounding settlements mostly with Buddhist remains seem to constitute a landscape which was expansive, had a strong hinterland and which may be regarded as urban. The remains of the Mahastupa at Kanaganahalli, the sculptures and the donatory inscriptions establish Sannati as a reputed Buddhist center. The Mahastupa was richly embellished (except the dome) and these embellishments gave insights in the gradual progression from Hinayana into Mahayana philosophy. The sculptures executed on the lower drum slabs belong to the first phase of the early Satavahana period. In this phase Hinayana philosophy was predominant and Buddha was worshipped in symbolic forms such as vajrasana with pada, horse, stupa, dharmachakra in railing, vriksha chaitya, Buddhapada and triratna. Later the Mahayana philosophy was introduced and represented by the images of Buddha. A total of two hundred and seventy inscriptions were recorded at Kanaganahalli. Most of the inscriptions record the donations made towards the embellishment of the stupa in the form of slabs, umbrellas, flower receptacle and other architectural members. It is noteworthy that many of the donations were given by people who had come from other places such as Bhokardan, Dhanyakataka, Mahishaka, Kupana, Vakaticha, Pitalkhora, etc. Thus it appears that Sannati-Kanaganahalli was a famous Buddhist center which not only had local following but attracted visitors from various places outside North Karnataka. It would be appropriate to conclude that Sannati and the surrounding settlements constituted an urban landscape which was at par with other early historic urban settlements in the Deccan and the middle Ganga plain in the North and was also perhaps the most renowned Buddhist settlement in North Karnataka during the early historic period.

7.10 Conclusion

In the early centuries of Christian era urban features could be identified in the settlements in the middle Ganga plain as well as Deccan including North Karnataka. The archaeological remains such as extensive pottery, standardized bricks used in structures, circulation of coins, script point towards commonality of cultures across various settlements. It also hints at possible exchange of ideas made possible by the movement of traders and religious groups. This however does not mean that there was one common source for the origin of urbanization from where it spread and reached different areas. An urban settlement would normally develop in its own environment and geographical setting, though it may receive influences from outside and as a result would ultimately have its own individual character. There is no denying the fact that development at Sannati was started by Mauryas and further promoted by the Satavahanas but the geographical setting and the role of local communities has to be recognized and it may be tentatively concluded that urbanization at Sannati was very much rooted in the immediate environment.

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APPENDIX

Inscriptions and Coins from Sannati

Donative inscriptions – Sl. No. 1 Inscription No. A.101 – Upper Drum slabs

Rano Siri -----dhama dana

This meritorious gift of encasement of veneering (*kachuka=kanchuka*) slab was made by householder Tokhi from Mahiseka along with his wife, son, son-in-law, daughter-in-law, kinsmen and daughter during the 16th reign year of king Siri Chimuka Satavahana (corresponds to 36 BC as per the shorter chronology arrived by Ajay Mitra Shastri) (Poonacha 2011, 443).

Sl. No. 2. Inscription No. A.75. Floor slab, northwest, Pseudo-pradakshin-patha

Sidham Na (mo) ---- hita sughatha

Success. Salutations to the much enlightened Lord of the Adholoka Mahachaitya. Meritorious gift of the uppermost (agatuka pata) and its line by the nun Dharmasri of the Kotujila family on the 10th day of 2nd fortnight of summer in the 35th reign year of king Vasisthiputra Sri Pulumavi along with her parents, all the preceptors, group of elders and the co-aestics for the well being and happiness of all beings/creatures (corresponds to 126 AD as per the shorter chronology) (Poonacha 2011, 443).

Sl. No. 3. Inscription No. A.15. tabha at northwest of western ayaka

(Sidhan) Rano ----- hi (ta) sughaya

(Success) On the fifth day of the fourth (fortnight) of the summer (*grishma*), in the fifth year (of the reign) of king Vasisthiputra Siri Satakarni, meritorious gift of medhi (*ujukapata-urdhvapakata*) slab, umbrella (*chhatra*) and uprights (*payaka*) were made by Satavahana Samana of Utarahakona (northern states ?), for the worship of all the Buddhas, towards the merit of parents and the well being of all the worlds (corresponds to 132 AD as per shorter chronology) (Poonacha 2011, 443-444).

Sl. No. 4 Inscription No.A. 68 : Narrative frieze of western *ayaka*

Namo Bhagavato ---- deya dha (ma)

Salutations to the Lord. Meritorious gift of Sanghaka, brother of monk Kanhasiri, on the first day of the first fortnight of the rainy season in th 11th (regnal) year of king Vasisthiputra Siri Satakarni (corresponds to 138 AD as per shorter chronology) (Poonacha 2011, 444).

Sl. No. 5 Inscription No. A.143 : *Chhatradanda*

Sidham ---- loka hitaya

(Success). Meritorious gift of umbrella by Bodhikaya, a monk and religious head, along with his parents, brothers and sisters on the first day of the first fortnight of the summer during the 11th (regnal) year of king Gautamiputra Sri Yajna Satakarni (corresponds to 191 AD as per shorter chronology) (Poonacha 2011, 444).

Sl. No. 6 Inscription No. A.145 : *Chhatradanda*

.... Savachchara ----- hitasughaya

Fragmentary. Meritorious gift of umbrella by ... dhama along with his wife and parents for the well-being of all in the summer of 10th (regnal) year of (Yajna Sri Satakarni) (?).

The papaleography of the inscription closely resembles that of Sl. No. 5 and hence it is ascribed to Gautamiputra Sri Yajna Satakarni (corresponds to 190 AD as per shorter chronology) (Poonacha 2011, 444).

Sl. No. 7. Inscription No. A. 150 :

(Namo Bhaga) ----- (lokahita sukhaya)

(Salutations to the Lord) Buddha. Offering of Chetiyapata (slab bearing chaitya depiction) by Hagana Kanhasiri, son of trader Devavanija, along with his mother, father and son on the 15th day of 10th year of the king Madhriputra Siri Pulumavi (corresponds to 236 AD as per shorter chronology) (Poonacha 2011, 444-445).

2.11 Information from the inscriptions –

Inscriptions mention names of several rulers. Mauryan emperor Asoka is mentioned twice. Satavahan rulers mentioned include Simuka, Siri Satakarni, Sundara Satakarni, Matalaka, Siva Siri Pulumavi, Gautamiputra Satakarni, Vasisthiputa Siri Satakarni, Yajna Sri Satakarni and Madhariputra Pulumavi (Poonacha 2011, 445).

In the inscriptions the stupa is referred to as Adholoka Mahachaitya (the great Chaitya of the nether worlds). The names and their variants by which the architectural members were known are also found in these inscriptions. *Ayaka tabha* (*ayaka* pillar), *chatari*, *chhata* (umbrella), *gola* (*anda*-dome slabs), *pushpagrahanika* (flower receptacle) are some of the terms used for architectural members in the inscriptions (Poonacha 2011, 445).

Kanaganahalli stupa, which was part of the suburb of the greater Sannati was in contact with the established contemporary Buddhist centres on the one hand and leading trade centres on the other as it was located on one of the trade routes of the ancient Dakshinapatha connecting Pataliputra and Banavasi via Paithan and Vidisa. It had contacts with the major trade centers like *Isila* (Brahmagiri), *Kupana* (Koppal) in the far south, *Dhanyakataka* (Amaravati) and *Kotura* on the northwest and east, *Vakataka Vishaya* and *Ujjain* in the central and further western India. These place names are found mentioned in the inscriptions. *Dhanayakataka* and its variant forms occur more than six times. There is reference to *Vakataka Vishaya*. Some of the place names such as *Kotura*, *Ujjain*, *Isila* and *Kupana* occur only once. *Kashi*, *Chedi*, *Ujjaini*, *Ramagrama* are few other place-names occurring in inscriptions of Kanaganahalli (Poonacha 2011, 446).

Kashi – The name of Kashi occurs as an identification of a character as *Bodhisato Kasirayo* evidencing the ancient city of Benaras (Poonacha 2011, 446).

Ujjaini – It is the famous capital of Vidisha. In the inscriptions at Kanaganahalli Ujjaini occurs in the context of the visit of Pulumavi to Ujjain probably after the victory over Chastana (Poonacha 2011, 446).

Ramagrama – It occurs in the context of a label inscription referring to one of the highly sculptured stupa depictions entwined by Nagas as *Ramagamilo athabhagha thubho upari*. It is known that Coliyas had built a *sharirika stupa* over the relics of Lord Buddha at Ramagrama after having received one of their shares of eight divisions (Poonacha 2011, 446).

Vakataka – The term “Vakataka” referring to the toponym of a territory or a clan occurs eight times. All these inscriptions are found engraved on the pedestal of Buddha sculptures kept in the *pradakshinapatha* and over the *ayaka* platforms. The inscriptions from the point of view of the phases of construction of the chaitya and palaeographically, the inscriptions and the sculptures belong to the last phase of the embellishment of the *maha stupa*. The term occurs as *vakatichana* and *vagatichana*.

Vakatakas were the pots-Satavahana rulers in the upper Deccan, probably belonging to the Vindhyan region of present Madhya Pradesh to the north of the river Narmada. In their later satges they moved southwards to Vidarbha and other regions of Maharashtra, Andhra Pradesh and Karnataka. They seem to have replaced the Andhra Satavahanas in the south and Vidarbha around the end of 3rd century AD.

There are at least two inscriptions referring to Vakatakas. The inscription of Amaravati (No. A. 14) is a fragmentary record mentioning (the gift of) Vakataka or *pakataka*. According to R.Chandra the *Pakatakas* could be same as Vakatakas. He further suggests that the Vakatakas in the Deccan could be traced as far as 2nd century BC. The earliest known epigraphical information in Karnataka region comes from the Bidar plates of Devasena (5th regnal year – 455-458 AD).

Devasena is the fifth king in the Vastugulma branch of the Vakatakas and the father of Harisena. The southern expansion of the Vakatakas had started in the later part of the reign of Pravarasena – 1 (275-335 AD) by the end of 3rd century AD (Poonacha 2011, 446- 447).

Kupana – The *anda* slabs carry inscriptions like *Kupanakasa*, probably indicating the gift by a person belonging to Koppal (Karnataka). The presence of two minor rock edicts at Koppal – at Palkigundu and Gavimatha at the highest altitude on the north and southern granatoid hillocks bordering the town which also has a number of dolmens of megalithic period, remnants of the brick-built structures (Satavahana period) on the foot of the hills particularly leading to the Palkigundu inscription reflect that Koppal was a well-established center (Poonacha 2011, 447).

Mahagama – The toponym Mahagama is found twice (Ins. Nos. A. 3 & B. 158) in Kanaganahalli inscriptions. This place can be identified with the present day Mahagaon in Gulbarga district. Explorations have led to the discovery of black-and-red ware, Russet-coated painted ware and red-slipped ware, characteristic of the early historical period (Poonacha 2011, 447).

Khalatika hills – A seven-lettered label inscription provided on the plain border below the lower register of a drum slab of *stupa* at Kanaganahalli reads *galatiko pavato*, i.e., “Khalatika parvata” identified with the famous “Barabar hills” in Bihar (Poonacha 2011, 447).

2.12 Monastic-orders/ranks –

Several people seem to have contributed towards the construction and embellishment of the stupa. Amongst them many belonged to the Buddhist order. The designations indicate different positions in the monastic order such as *upasaka*, *upasaki*, *bhiku/bhikuni*, *thera*, *pavayita*, *antevasi* and *sutrantika* *Dharmaadhyaksha Upadhaya*, etc (Poonacha 2011, 447-448).

2.13 Religious affinity –

The sculptural delineations in the early phase have a strong Hinayana affinity and in the second phase there is more pronounced Mahayana influence. However, in the inscriptions there is no reference to any particular sect of Buddhism such as Theravada, Mahisasaka. There is information about the hierarchy of monks and teachers like *thera*, *achariya*, *dhamakadhika*, *pavayita*, *bhayata*, *bhiku* and *samana*, etc. But the specific sect to which they belonged is not mentioned. The sculptural depictions of Kashypa, Dudhubisara (Dundubhisvara) and others who were deputed by the Mauryan emperor Asoka for the spread of Buddhism in the Himalayan region and few references to Haimavata sect in the form of *Himalaya dhama sisehi* suggests that the religious sect at Kanaganahalli could be Haimavata (Poonacha 2011, 448)

2.14 Social order -

In the inscriptions there is information about the social and official order like *Amacha*, *talavara*, *kumara* and *rathika* (Poonacha 2011, 448).

2.15 Location of Inscriptions –

1. Railing

Tabha

Part A 1-16, Part B 151-4

Alambana (Ushnisha)

Part A 17-23, Part B 165-173

2. Vedika

Vedika pata

Part A 24-58, Part B 174-197

Pushpagrahinis (flower receptacles)

Part A 59-67, Part B 198-228

Pratima pitika (narrative friezes)

Part A 68-70, Part B 229-236

Ayaka

Part A 71-72, 150

Ayaka pillars

Part A 73-74

Pradakshinapatha floor slabs over vedika

Part A 75-77

3. Buddha sculpture pedestals

Part A, 78-87

Buddhapada

Part A 88-92, Part B, 237-239

4. Medhi (upper drum) slabs

Part A 93-142, Part B 240-247

Anda (dome) slabs

Part B 248-250

Chhatra danda (Chhatra yashti)

Part A 143-147, Part B 251-256

5. Miscellaneous

Pillar

Part A 148

Stone Bowls of offering

Part A 149, Part B 257-261

Votive stupa

Part B 262

Tenon of tabha

Part B 263

Dwarf Pillar shaft near STR-V

Part B 264-270 (p. 449)

Inscriptions

Part – A

Railing

Tabha (Payaka) (Uprights)

1. *(Na) vakamikasa Himalaya*

Dhamasisihi Mahinata (sa)

Deya dhama

Pious gift of Mahinata, the religious disciple and an artisan hailing from Himalaya. It could also be the name of the individuals following Haimavata sect of Buddhism.

2. *Athasata kahapanani dirani (ma)*

diyasata dharana ayuvadhanika

gayanasa Dhamilayasa deya dhama

Pious gift of a treasure of 800 karshapanas and 200 *Dirana* (*dinaris* ?) for longevity of self by *Dhamilaya*.

3. *Mahagamilasa Naganakasa*

Kotubiniya Ramamnikaya, danam

Pious gift of Ramamnika, wife of Naganaka, hailing from Mahagrama.

4. *Utaranam ayuvadhanikam Chulayaya*

Deya dhamam payako sasujiko imam

Pious gift of the *payaka* (upright) together with the *suchika* (crossbar) by *Chuliya*, for the longevity of *Utara*.

5. *(Ma) hi (sa) kasa Totupasa*

Kasa danam

Pious gift of Totupasaka, a lay worshipper from *Mahisaka*.

6. *Balivarakasa Ghosakayasa dana*

Pious gift by *Ghosaka* from *Balivaraka*

(or gift by *Balivaraka* (?), an official announcer of

7. *Mitanasaka da (na)*

Gift by Mitataka

(p. 450)

8. *Therasa aya Isirakhitasa atevasiniya*

bhikhuniya Naguyaya deya dhama

Pious gift of *Naguya*, a nun and disciple of the revered teacher *Rishirakshita*.

9. *(Pa) vayitasa bhutilasa*

(de) ya dhama

Pious gift of *Bhutila* a monk.

10. *Utaranam ayuvadhanikam Chulaya*

ya dana deya dhammam payako sasujiko

Pious gift of *payaka* (upright) together with the *suchikas* (crossbar) by *Chuliya*, for the longevity of *Utara*.

11. *(i) nayasa d?ya dha?ma? eya dhammam*

Meritorious gift of ... *inaya*.

12. *Himarakhitaya ateva*

siniya Vidhiya danam

Pious gift of *Vidya*, female disciple of *Himarakshita*, a nun.

13. *Setivayikaya Isi*

lanikaya da (nam)

Pious gift of *Rishilanika* from *Setivayika* or *Srivatika*.

14. *Pavayitasa....*

(Pious gift) of a monk.

Sl. Nos. 14 and 160 appear to form parts of the same inscription. Reading together they mean

Pavayitasa Malasadanam, pious gift of Malla, a monk.

15. *(Sidham) Rajno Vasithiputasa Siri Sadakanisa*

Savachchare 5, Gimhana pakhe 4 divasa

5 Utarahakona Satavahana samanena ujuka pato

Chataricha payako deya dhama

Sava Budha puchaya matapituna punyaya sava

Loka hi (ta) sughaya

On the fifth day of the fourth (fortnight) of the summer (*grishma*), in the fifth year (of the reign) of king Vasishtiputra Siri Satakarni, meritorious gift of *medhi* (*ujukapata=urdhvakapata*) slab, umbrella (*chhatra*) and uprights (*payaka*) were made by Satavahana Sramana of Utarahakona (northern states?), for the worship of all the Buddhas, towards the merit of (his) parents and the well being of all the worlds.

(Poonacha 2011, 451)

16. *(Bho) gavadhanakasa Bodhi Gahapatino*

nasa Isimitasa payako sa

(su) chiko sa alabajno deya dhama

Pious gift of *payaka* (tabha), *suchika* along with *alabajano* (*alambana* i.e. *ushnisha*) by Rishimitra, a relative of house holder Bodhi from Bhogavardhana (modern Bhokardan).

(b) *Suchi* (crossbars)

None of the *suchis* are inscribed though they formed the absolute component of the *alambana* or *payaka*.

(c) *Ushnisha (alambana)* – Coping on railing

17. *Bhikhuniya pusayaya deya dhammam*

Pious gift of Pushya, a nun.

18. *Bhutannikaya bhuyi ya deya dhammam*

Pious gift of Bhutanika, and of Bhuyi (ma)...

19. *Dhamutarayaya danam*

Gift of Dharmottara.

20. *Rakhitanikaya duhutaya Samanikaya*

deya dhammam

Pious gift of Samanika, daughter of Rakhitanika.

21. *Nagiyaganuta*

Indistinct. (Nagiyagupta)

22. *Amachasa Budhinakasa danam*

Pious gift of Amatya Budhanaka, a minister

23. *Bhuyima bhikhuniya deya dhammam*

Pious gift of nun Bhuyima.

(Poonacha 2011, 452)

Vedika

(a) Vedika slabs

24. *Ayasa Anadasa viharo*

Vihara of Arya Ananda.

25. *Ayasa Sariputasa Viharo*

Vihara of Sariputra.

26. *Piyaka Matucha dana*

Gift by the mother of Piyaka (Priyamkar).

27. *Khodamulayana Dhamayaya da (nam)*

Pious gift of Dhamaya of Khodamulaya.

28. *(Dha) nakatikaya Ayadasiyasa puphagahanika dana*

Gift of flower receptacle by Aryadasiya of Dhanyakataka (Amaravati).

29. *...sa aya Budharakhitasa sapuphagahanika da (na)*

Gift of flower receptacle by revered Buddharakshita of ... (place name missing).

30. *(si) rikaya saputakaya sa duhutukaya dana*

Pious gift of ... sirika along with son and daughter.

31. *(ka)rasa Mahamaritino cha Todakada cha dana chediya*

Gift of *chaitya* (slab with *chaitya* motif) by Mahamariti and Todakada belonging to Kara.

32. *Kagisa sabha (ri) yasa saputakasa (sa) d (h)*

u...u (tu) ya cha ka (?) ma

Offering by Kagi(missing) along with his wife, son and daughters.

33. *(Dh) aramakanhasa bhariyaya Sivasinikaya dana*

Pious gift of Sivasinika, wife of (Dh) aramakanha.

34. *Chakamo*

Promenade. Chankama.

35. *Kosambhakuti*

Monastery of Kosambi.

36. *Utupakho*

Ritupaksha. Female retreat or apartment (for nuns).

(Poonacha 2011, 453)

37. *Ayasa Anadasa*

(Dwelling of) Arya Ananda.

38. *Bhagavato*

Dwelling of the master.

39. *Yakhi Piyekaramata*

Beloved mother of Yaki (Yakshi) Priyakara (Priyamkara). The figure of the woman referred to in the inscription is seated in the tiled pavilion with finials behind the gate house located in the foreground of the compound of the *Jetavana* next to the hermitage of Buddha. She is holding a lotus (lotus *dvajah* ?) in her right hand with an attendant by her side and a child on her left lap. In this context it is important to note that the *samyukta Nikaya* (x.6) briefly narrates the story of a local *yakshi* known as Priyamkara's mother who became an ardent devotee of Buddha. "She with her boy on her hip came unexpectedly on the settlement and heard the sweet voice in the *vihara*. Cut to the heart and smitten to the marrow, she stood like a post". Later Chinese sources associated the story with *yakshi* Abhirati, mother of Priyamkara with the Buddhist goddess Hariti.

40. *Ayasa Rahulasa*

(Dwelling of) Arya Rahula.

41. *(ya) (kho) Gosaragiro*

Yaksha ... Gosaragiro.

42. *Navakamikasa Ayamalasa matuya ayaha dayakammaya cha danam*

Pious gift by the mother of Aryamalla, a supervisor (*navakamika*)

for the slab (*aya*) and the carving (*daya kamma*) on it.

The inscription begins with a triratna and ends with a *swastika* – auspicious symbols.

43. *Nakaraya Mahakala*

Serpent king Mahakala.

44. *pato ayako*

Ayaka veneering slab.

(Poonacha 2011, 454)

45. *(U) pasakasa Bodhigutasa dana*

Pious gift of lay worshipper Bodhigupta.

46. ... *maya dana Utaramitasa*

Pious gift of (object of gift missing) by Utaramita.

47. *Therasa ... asa atevasikasa Aya Ju ... bhaginikasa pato dana*

Pious gift made for the slab by Arya Ju ..., a disciple of (name missing), the elder along with his sister.

48. *(Ga) hapatino upasakasa pato*

(Gift of) a (drum) slab by a lay worshipper and house holder ... by name.

49. *Gahapatino Chidoga...*

(Gift of) householder Chidoga.

50. *Samanasa Yakhasa dana*

Pious gift of *Yaksha*, a monk.

51. *Pokoturakasa yakhasa dhama cha .. no*

Pious gift by *Yaksha* from Pokotura ... and (the name of the object donated is missing).

52. *Mahisekasa sapuli (ti) yasa sabharyasa ... silasa pato danam*

Pious gift of (drum) slab by ... sila from Mahiseka along with his wife and daughter.

53. *Dhamnakatikaya pavayitasa Ayamitaya Duhutuya cha sa ...*

Pious gift of Aryamitra, a monk from Dhanyakataka, along with his daughter.

54. *Chula (yakha) matuya u (pa) sikaya danam pato*

Pious gift of the slab by a lay-worshipper and mother of *Chula Yaksha*.

55. *Dhanyakatika*

Dhanyakataka.

56. *Sapudiyasirikasa Bodhiyasa putigaya pato danam*

Pious gift of Bodhiya hailing from Sapudiyasirika along with his daughter.

(Poonacha 2011, 455)

57. *Sutatikasa Ayagolasa atevasisa Samasa dana*

Pious gift of Sama, the disciple of Arya Gola, proficient in all the Buddhist Suttas (Sutatika=Sutrantika).

58. *...sa Bhadakarikasa Makasamasa dana*

Pious gift of Makasamas from Bhadakarika. The personal name Makasamas appears to be of Greco-Roman origin.

(b) *Pushpagahanis* (Pushpagrahinis) (Flower receptacles)

59. *Khjanakarasa Mahisekasa Kupanasa danam*

Pious gift of Mahiseka (a Khajanakara) from Kupana (?).

60. *Khjanakarasa Mahisekasa Kupanasa danam*

Pious gift of Mahiseka (a Khajanakara) from Kupana (?).

61. *Therasa aya Punavasuno dana sava Budhapuyaya*

Pious gift of the revered elder Punarvasu for the worship of all the Buddhas.

62. *Dhanayakatikaya gharaniya Naguya (dana)*

Pious gift of Naguya, a house wife from Dhanyakataka.

63. *Dhamasiriya pato danam*

Pious gift of slab by Dharmasri. The inscription is preceded and succeeded by nandipadas.

64. *Nandakasa dana*

Pious gift by Nandaka.

65. *Dhanyakatikaya Nagiloya*

manikarakasa mahamaritino sa bhariyasa

saputakasa saduha ... matusekasa dana chetiya

puphagaha nika

Auspicious *nandipada* mark in the beginning. Pious gift of flower receptacle by Nagiloya, a maker of beads (*manikara*) and a Mahamariti from Dhanyakataka along with his wife, son, daughter-in-law and mother to the stupa.

66. (*Gaha*) ... *pataniyaya Sudhamaya saputikaya dana upasa*

(Pious gift of) ... housewife Sudhama along with her daughter, a nun ... (name is lost).

67. *Dhanakatikaya Utaraya*

Pious gift of Utara from Dhanyakatika.

(Poonacha 2011, 456)

(c) *Patima pata* (narrative friezes)

Western Ayaka

68. *Namo Bhagavato Rajno Vasithiputasa*

Siri Satakanisa Sava 2 va pa 1 di 1 pava (y) itasa

Kanhasirisa bhatuno Saghakasa deya dha (ma)

Salutations to the Lord. Meritorious gift of Sanghaka, brother of monk Kanhasiri, on the first day of the first fortnight of the rainy season in the 2nd (reignal) year of king Vasisthiputra Siri Satakarni.

69. *Botikaviharakanam Therana bhayata Haganam*

atevasi (kasa) Kanhasirisa sa (va) lo (ka) hitadha cha

(sava) Budha (pu) jaya deya dhama ama (pihi) .. ta..

Meritorious gift (object of the donation mutilated) by Kanhasiri, a disciple of Haghana, the revered elderly monk of Botika (*Bodhika*) *vihara*, for the well being of all and worship of all the Buddhas.

70. *Pava (yita) sa Kanhasirisa bhaginiya Nanikaya deya dhama*

Meritorious gift of Nanika, sister of monk Kanhasiri.

Northern Ayaka

71. *Achaiyana bhayatasa Satakamnha (kasa)*

atevasini (ya) (pa) va (y) itaya Budharakhitaya

ayako pata Adholoka chetiya dhamaraika

deya dhamo patima patti (ka)

Meritorious gift of *ayaka pata* (veneering slab) bearing *Adholoka chetiya dhammaraika* (Adholoka chetiya Dharmarajika) and the *patima-pitika* (pratima pattika-sculptured narrative frieze) by Budharakhita, a nun and disciple of the revered preceptor Sakta kamnha.

72. *Sidham Kotugalikana achariyanam bhayata*

Sata (k) amnha (sa) atevasiniya bhikhuniya

Dhamarakhitaya adha (lo)

(Meritorious gift of ...) to *adhaloka* (chaitya) by Dharmarakshita, nun and disciple of the revered preceptor Satakanha (Svatikrishna or Satakarni) from Kotugalika.

(Poonacha 2011, 457)

Ayaka Pillar : Eastern Ayaka

73. *Dhanakadakasa*

Natabahokana

Utaka putasa

gahapatino

Asilasa

sa matukasa

sa bhariyasa

saputakasa

ayuvadhanika

ayago thabho

chatari deya dhama

Meritorious gift of the *ayaka* pillar and umbrella by Asila a householder, son of Utaka of Natabahuka family of Dhanayakataka, along with his mother, wife and son for their longevity.

74aya...

chatari deya dhama

Meritorious gift of the (*ayaka* pillar) and umbrella by

Pradakshina patha floor slabs over Vedika

75. *Sidham Na (mo) Bhagavato samasa Budhasa adholoka maha*

chie (t) iyasa Rano Vasithiputa Siri Pulumavisa

savachare 30 + 5 Gihmana pakhe 2 (di) 10 kotujilana

bhikuniya Dhamasiriyaya agaduko patasa

tharo cha deya dhama sahaamapihi saha cha ma

upajatha hi bhayata varana Bhutihi saha cha bhayata

sipehi sava satana cha hita sughatha

Success! Salutations to the much enlightened Lord of the Adholoka mahachaitya. Meritorious gift of the upper most slab (*agatuko-pata*) and its line by the nun Dharmasri of the Kotujila family on the 10th day of the 2nd fortnight of summer in the 35th (reignal) year of king Vasisthiputra Sri Pulumavi along with her parents, all the preceptors, group of elders and ascetics for the well being and happiness of all creatures.

(Poonacha 2011, 458)

Near Easyern Ayaka

76) *Budhaya danam*

Pious gift of Buddha.

South-west corner

77) *Tisaya upasikaya danam*

Pious gift by Tishya, a female worshipper.

Buddha sculpture pedestals

78) *Krakuchchanda*

Sidham Bhagava samasa Budho Kosadho

Upasakena Vakatichana Visakhena saputakena

Kari (a) pita

Success. (This image of) the perfectly enlightened Lord Kosadho (Kakuchchanda) is got carved by the lay worshipper Visakha hailing from Vakaticha along with his son.

79) *Kanakmuni :*

Sidham Bhagava samasa Budho Konagamuni

Upasakena Vakatichanam Visaghena

saputakena karito

Success. (This image of) the perfectly enlightened Lord Konagamuni is got carved by the lay worshipper Visakha hailing from Vakaticha along with his son.

80. *Vipasyin :*

Bhagava Budho Vivasi Upasakena Vakatichanam

Visaghena Karapito saputakena Seli (va) dhaki

(sa) Asadevasa panatukena Saminagasa natukena

Madhasa putena rayamachena Bodhigutena kato

(This image of) Lord Buddha Vipasyin is got carved by Visakha of Vakaticha along with his son. Bodhigupta, the sculptor and the royal minister (*Raja-matya*), son of Madha (Madhava), grandson of Saminaga (Swaminaga) and great grandson of Asadeva (Vasudeva) executed it.

(Poonacha 2011, 459)

81. *Sikhin* :

Bhagava Samasa Budho Sighi Vakatichana

Visaghena saputakena Karito (karapito)

Selivadhakisa A (sa) devasa panatuna Saminagasa

natukena Madhasa putena rayamachena

Naga bodhina kato

(This image of) the perfectly enlightened master Sikhin is got carved by Visagha of Vakaticha along with his son. Nagabhudi the sculptor, son of Madha (Madhava), grandson of Saminaga (Swaminaga) and great grandson of Asadeva (Vasudeva) executed it.

82. *Vishvabhu* :

Bhagava Budho Vesabhu Vakatichana

Visaghena saputakena Karito (Karapito)

Selivadhakisa A (sa) devasa panatukena Saminagasa

natukena Madhasa putena rayamachena Bodhigutena kato

(This image of) the Lord Buddha Vishvabhu is got carved by Visagha of Vakaticha along with his son. Bodhigupta, the sculptor and royal minister, son of Madha (Madhava), grandson of Saminaga (Swaminaga) and great grand son of Asadeva (Vasudeva) executed it.

83. *Kasyapa*

Sidham Bhagava samasa Budho Kasapa

Vakatichanam Visakanena saputakena karitam (karapitam)

Success. (This image of) the perfectly enlightened Lord Kasyapa is got carved by Visakha hailing from Vakaticha along with his son.

(Poonacha 2011, 460)

84. *Sakyamuni-Siddhartha*

Sidham namo Bhagavato samasa Budho

Sakapati ...

(Sidhatho) .. Visaghanena saputakena karitm (karapitam)

Kanhilena kata patima pidhita (ka)

Success. (This image of) the perfectly enlightened Lord Sakyapati Siddhartha is got carved by Visakha hailing from Vakaticha along with his son. Kanhila carved this image and the pedestal.

(Poonacha 2011, 460-461)

85. *Maitreya (Anagata)*

Sidham Bhagava Bodhisato ayito Anagato

Budho Upasakena Vakatichanam

Visaghena saputakena karito (karapitam)

Savalokasa (va) hita sugha (ya) cha

Success. Lord Bodhisattva, the transcender of the universe, yet to be born as Buddha is victorious. (This image) is got carved by Visakha hailing from Vakaticha along with his son for the well being of all worlds.

86. *Sidham Namobhagavato Budhasa Sakamanasa Patima thavita Mathikumara*

bha je ya radhaya

punhaya khajagopiya

duhutu kena dhama

kara

Success, Salutations to the Lord. (This) image of Buddha Sakyamuni is installed by Mathikumara (son of a minister ?).

Detached Pedestal

Buddha Pedestal, Southern ayaka

87. *Daraghattikehi Bhagavato*

Budhasa patima karito

sabhutino Upajhayena natukena

Venona Upajhayena

putena Najikena kato

This sculpture of Lord Buddha was got carved by Dwaraghatikas. They could be the persons hailing from the place named Dwaraghatika probably Naneghat.

This (sculpture of Buddha) is carved by Najika, son of Venu Upadhyaya and maternal grandson of (Asva or) Pushpabhuti Upadhyaya.

(Poonacha 2011, 461)

Buddha-padas

88. *Therana bhyata Budhatatana atevasisa*

bhayatasa Sihalasa Upajhayakasa deya dhama

paya pato mahacheticha saha Achari

ya Upajha (yehi) (sa) ha matu pitusi sahavasavehi

sava satana hitasughavahaya

This footprint slab and the votive stupa are the meritorious gifts of revered Upadhyaya Siha (Simhaka ?), the disciple of revered elder Buddhatrata (one who has Buddha as his protector), along with co-preceptors, teachers, parents, residents and students (at the moanastery) for the attainment of well being of all.

89. Along the top of the ridge of Buddhapada

Therana bha (ya) ta Budhatatana (a) tevasisa

Bhavajihakasa pavatayakasa deya dhama

paya pato

This foot print slab is the meritorious gift of the monk Bhavajivaka, the disciple of revered elder Buddhatrata (one who has Buddha as his protector). Instead of Pavatayaka, the scribe has inscribed *pavayataka* – a scribal error of *aksharavyatyaya*.

90. Along the front edge of Buddhapada

... Midhiya cha samuddi...

Fragmentary record Midhiya and Samriddhi.

(Poonacha 2011, 462)

91. Along the front edge of Buddhapada

Sidham Therana bhayata Budhatatanam

atevasisa bhayata Sihasa deyadhama pat (o)

mahacheticha saha Acharihike Upajhathehi saha

matopitu (hi) saha cha ateva sikehi

(sava) (loka) hitatha

Success. This footprint slab and the votive *stupa* are the meritorious gifts of revered Siha (Simahaka), the disciple of revered elder Buddhatrata (one who has Buddha as his protector), along with teachers, co-preceptors, parents and students (at the monastery) for the well-being of all worlds. Instead of *acharikehi* the scribe has inscribed as *acharihike* - a scribal error of *Akshara vyatyaya*.

(Poonacha 2011, 462-463)

92. Along the top corner of front edge

Sidham Namō Bhaga....deya dhama...yaya

Fragmentary.

Upper drum (Medhi) – sculptured veneering

Inscriptions mentioning names of Royal personalities

93. *Bodhisato Somarato*

Bodhisatva Somarata.

94. *Rayo Matalako*

King Matalaka (Mandalaka or Puttalaka). The 18th king of the Satavahana dynasty according to puranic genealogy (longer).

95. *Raya Asoko*

King Asoka

96. *Raja Siri Chhimuka Sadavahano Nagaraya*

sakhavavi (pi)

King Siri Chhimuka Sadavahana and his friend serpent king.

97. *Raya Asoko*

King Asoka.

98. *Raya Chakavati Satarajano*

King Chakavarti Satarajano (Mandhata Chakravarti).

99. *Raya Pudumavi ajayatsa Ujeni deti*

King Pudumavi is handing over Ujjaini to Ajayata.

100. *Raya (U) dayano*

King Udayana.

(Poonacha 2011, 463)

101. *Rano Siri Chhimuka Satavahanasa*

savachhare sode Mahiseka

sa gahapatino Tokhisachana gahapati putesa

sabhariyesa sa

Saputasa sajamatusa sasunhasa sagotasa

saduhu (tasa)

kachuka deya dhama dana

This meritorious gift of encasement (*kachuka=kanchuka*) slab made by householder Tokhi from Mahiseka along with wife, son, son-in-law, daughter-in-law, kinsmen and daughter during the 16th (regnal) year of king Siri Chimuka Satavahana.

102. *Raya Satakamni (sa) gayasara himayani payumani*

deno yeti

King Satakarni arrives to gift golden lotuses to Gayasara (?).

Jatakas

103. *Jatakam Chhdatiyam*

Shaddanta Jataka.

104. *Jatakam Chhadatiya*

Shaddanta Jataka.

105. *Jatakam Chhadamtiyam*

Shaddanta Jataka.

106. *Jatakam Jagarakhasa*

Jataka of an alert (monkey) (?).

107. *Jatakam Vidura Punakiyam*

Vidura (pandita)-Pumaka Jataka.

108. *Jatakam Sadiniyam*

Sajiniya Jataka.

(Poonacha 2011, 464)

109. *Jatakam Vidura Punakiyam*

Tomda gahapatino deya dhama sava

Vidura (pandita)-Purnaka Jataka

Meritorious gift of householder Tonda of all (all refers probably to the successive panels of this Jataka).

110. *Jatakam Sudasomiyam*

Sutasoma Jataka.

111. *Jatakam Vesantariya*

Vessantara Jataka.

112. *Hamsa Jatakam upari*

Hamsa Jataka – above (in the register).

113. *Suka Jatakam*

Suka Jataka.

114. *Jatakam Aridamiya*

Arindama Jataka.

115. *Jatakam Senakiyam upari*

Senakiya Jataka above (depiction in the register above).

116. *Jataka Velamiya*

Velamiya Jataka.

117. *Jatakam vesatariya*

Vessantara Jataka.

118. *Idasala guha*

Indrasala cave. Dwelling of Indrasala.

This is identified as a natural cave at Griyak situated on the outer face of the eastern hills of Rajgir. It is the site where Sakra once is said to have visited Buddha in order to solve his doubts. The place contains, among other ruins, a cylindrical brick *stupa* said to have been built by Asoka. The *stupa* in its extant condition measures 28 feet in diameter and 21 feet in height, standing on a 14 feet high plinth.

119. *Hemavata Yakho nagahi*

Yakshas (=Garuda) and Nagas of Himalayas.

120. *Bhakavato je (na na)*

Birth of the Lord.

(Poonacha 2011, 465)

121. *Sakiyavadhanam cherapiyam*

Presenting baby Siddhartha in front of Sakyavardhana.

122. *Sariramibhago*

Division of relics. (Worldly pleasures ?).

123. *Abhinigamana*

Departure.

124. *Chudaharana*

Transportation of the crest jewel.

125. *Marabhago*

Defeat of Mara.

126. *Devoharanam*

Descent of the Lord.

127. *Galatiko Pavato*

Khalatika mountains.

128. *Ayasa Kasapagotasa Sivikapayanam*

Travel of revered Kasyapagotra in a palanquin.

129. *Sarira vibhago*

Division and transportation of relics.

130. *Upayana*

The approach for siege.

131. *Jattagharoo*

Chaityagriha (?) Jatagriha.

132. *Ramagamilo athabhagathubo upari*

(Depiction) above is the Asthabhaga-stupa (*stupa* built over 1/8th portion of relics) at Ramagama.

133. *Nagaraya patarako*

Serpent king Bhattaraka (revered serpent king).

134. *Suvira Sakiyani*

Suvira with her friends (Suvira, the Sakya princess).

135. *Lagukomeya kathalika*

Story of Lagukomeya.

136. *Isaradahiko Ghumata puto*

Isvaradahaka, son of Ghumata.

(Poonacha 2011, 466)

137. *Ayo chediavaniyo Mud (r) aka sethi kumaro cha*

Arya Mud (r) aka Sethi, a revered trader from Chedi country, along with his son.

138. *Todakadasa kachukaniyo t (d) ana*

Gift of the encasement slabs by Todakada.

139. *Ayo Mahimo Sachanamo ayo cha Dudubhisaro*

The revered Mahima (Majjima) Satyanama and the revered Dundhubisvara.

140. *Devi Samivati*

Queen Samivati.

141. *Suja (ta) mi ka duhu ... cha Nagaraya*

Fragmentary. Sujata, daughter of ... and the serpent king.

142. *Satipanaguha*

The sacred cave.

Chhatradandas

143. *Sidham Rano Gotamiputasa Siri Yana Satakanisa*

Sava

Hematana pakha – diva – bhikhusa Dhamakadhikasa

Bodhikayasa

chata deya dhama Saha matapituhi saha cha bhatu

bhaginihi

sava loka hitaya

Hail! Meritorious gift of umbrella by Bodhika, a monk and religious head, along with his parents, brothers and sisters on the first day of the first fortnight of the summer during the 11th (regional) year of king Gautamiputra Sri Yajna Satakarni.

(Poonacha 2011, 467)

144. *Sidha (m) Namu Bhagavato Budhasa*

Bhikhusa Budhikayasa chchata deya dhamam

Saha matapituhi

saha cha bhaginihi gola cha Bodhi (ya) a cha Savalokahitaya

(lo is written between sa and va below as a fourth line)

Success. Salutations to Lord Buddha. Meritorious gift of umbrella as also the votive *stupa (gola)* (and the veneering slab depicting) Bodhi tree by monk Budhikaya (Bodhikarya revered Bodhika) along with his parents and sisters for the well being of all worlds. The said objects of donation were part of southern ayaka assemblage.

(Poonacha 2011, 467-468)

145. *Savachara 10 gimhana*

..... *dharmasaha bhayaya* ...

..... *chata ahayo matapi* ...

..... *tana hitasughaya*

Fragmentary. Meritorious gift of umbrella by dhama along with his wife and parents for the well-being of all in the summer of 10th (reignal) year (of Yajna Sri Satakarni) (?).

146. *Timhanakasa duhu*

tuya Viranaikaya

deya dhamam chchta

Meritorious gift of umbrella by Viramnika daughter of Timhana.

147. *Namo Bhagavato Budha (sa)*

...toda thupabadama

.....karapitam ... Sagha

kena .. Mahisakasa

Salutations to Lord Buddha. stupa is got prepared by Sagha (ka) of Mahisaka?

Miscellaneous and Fragmentary

Pillar

148. Part of an Insitu pillar in STR- 5

.... Satakena Mahasenadatena kumaradatena Bodhi

kaya cha Viramnika ...

.... Savalokahitaya

Fragmentary. Refers (to the gift made by) Kumaradatta, Mahasenadatta and Bodhika and Vikramnika for the happiness and prosperity of all.

Stone bowl of offering

149. Fragments of a stone bowl

.. Kotumbudha deya dhammam

Meritorious gift by Kotumbudha...

(Poonacha 2011, 468)

Eastern Ayaka

150. *(Namo Bhaga) vato Budhasa Rano*

Madhariputasa Siri Pulumavisa Sava

(chchare) 10 diva 15 ka pavatakasa

(de) vavanija putasa Hagana Kanhasirisa

samatukasa sapitukasa deya

dhama chetiyapata sava ...

(lokahita sukhaya)

From this inscription it is quite apparent that during the reign of Madhari Puta Siri Pulumavi, almost all the structural activity of the stupa had been completed and only a few alterations like changing the mutilated veneering of the eastern ayaka platform, introduction of Buddha sculptures over the ayaka platform at the cardinal directions and placing of Manushi Buddhas in the sub-cardinal directions in the back drop of non-ornate Vedika slab, construction of square brick structures numbered 5,6,8, 9 and 10 with votive chaityas and enshrining earlier Buddha padas must have been carried out.

(Poonacha 2011, 469)

Part B

151. *Setivayikaya bhikhuniya Chuliya ya*

deya dhammam payako sasujiko

Pious gift of the upright and the crossbars by Chuliya, a bhikuni from Setvayika (Srivatika).

152. *Bhikuniya Madibhika*

maya danam

Pious gift of a bhikuni for the construction of ...

153. ... (*bhi*) *kuni Utaya danam*

Pious gift of Uta the nun.

154. ...*ya Samaya ...*

.. sa suchiko danam

Fragmentary. Records the gift of *suchika* by Sama.

155. *Setivayikaya bhikhuniya Chuliyaya*

deya dhama payako sasujiko imam

Pious gift of the upright and the crossbars by Chuliya, a bhikhuni from Setivayika (Srivatika).

156. *Patigaligaya bhikhuniya Chetiya*

vaya payako sasujiko deya dhamma

Meritorious gift of payaka and *suchika* by Chetiya, by a nun from Patigaliya (Pitangalya i.e., Pitalkhora).

157. *Patumayaya duhutuya Budha*

Rakhitanikaya deya dhama

Meritorious gift of Budharakhitanika, the daughter of *Patuma* (Padma).

158. *Mahagamilasa pa ..*

Suliyasa payako (sa) ..

Pious gift of the upright (and the crossbars) by Suliya (Surya ?), a (monk) from Mahagrama.

159. *Bhikuniya Samika (ya) deya*

payako danam

Pious gift of the upright by the nun Samika.

160. *(Ma) lasa danam*

Pious gift of Malla.

(Poonacha 2011, 470)

161. *...yasa ateva ... ghinikaya deya..*

(Pious gift of) ..ghinika a female disciple of ..

162. *Pavayitasa Nagutaraya*

sa deya dhama

Meritorious gift of Nagutara, a monk ...

163. ...*la Isidinayasa ateva ...*

Bhikhuniya Budhaya deya ..

Pious gift ... by Budha, a female disciple of Rishidina from ...

164. *Navakamikasa Aya Himalayasa atevasiniya Malagi*

liya Jaliyaya deya dhama

Pious gift of a female disciple Malagi ... of the revered Himalaya, a supervisor of constructions.

(b) *Suchi* (crossbars) :

None of the suchis are inscribed as they formed the absolute component of the *alambana* or *payaka*.

(c) *Ushnisha (alambana)* – Coping on railing :

165. *Variyaya bhaginiya samanikaya deya dhamam*

Pious gift of sisters and nuns of Variya (?)

166. *Dhamarakhitaya misina. bhagi (ni) ..*

(Pious gift of) Dharmarakshita ..

167. ... *nikaya danam*

Gift of a lady nika.

168. *Bhikhuni (ya)*

(Gift of) nun.

169. 1. *Pisachakoram yianom Gopamnakasa saputasa*

2. *sa purisa Yatonakasa danam alambanam*

Gift of *alambana* (*ushnisha*) by Yatanaka son of Gopamnaka along with his wife haiing from pisachakokayiyana (place unidentifiable).

170. *deya dhama (da)*

Pious gift.

171. *Magatukasa cha...*

Indistinct.

172. *Isirakhita*

Rishirakshita.

(Poonacha 2011, 471)

173. *Sutatikasa Mitasatino bhaginiya bhikhuniya datiya danam*

Gift of Datiya a nun and sister of Mitraswati, proficient in the *sutras*.

Vedika

(a)Vedika slabs

174. *Pokoturakasa pa (da)*

Gift of a person belonging to Kotur.

175. *Gahapatino upasaka (sa) (Bo) dhigutasa putasa Bodhiyanakasa dana*

Gift by Bodhiyanaka son of Bodhigupta, a lay worshipper and a householder.

176. *Ayasa Subhutino Viharo*

Viharo of Arya Subhuti (probably Buddha).

177. *Rahulasa Viharo*

Vihara of Rahula.

178. *Bhagavato viharo Kosabhakuti*

Kosambhakuti, the monastery of Lord Buddha.

179. *Koturakasa Chadumughusa sabha (tu) kasa danam*

Gift of Chadumugha (Chandramukha) of Kotura along with his brother.

180. *Yasanakasa ... (A) yako*

Pious gift of panel) depicting *yasana* (*vyasanas*).

181. *Bhikhuniya Budharakhitaya Kanhaya cha dana golaya cha*

Pious gift of the dome (anda) by Kanha and Bhudharakshita, a nun.

182. *Ka (nhila) .. putasa Bodhiyanakasa dana*

Pious gift of Bodhiyanaka son of (Kanhila).

183. .. (ate) *vasiniya bhikhuniya*

(Pious gift by) disciple and nun.

184. *Rahulasa*

(Dwelling of) Rahula.

185. .. *Kudurakasa Mahisekasa cha danam pata*

Gift of *ayaka pata* (drum slab) by Kuduraka and Mahiseka.

186. *(ha) likani (no)*

Fragmentary.

187. *Aya Isipalitasa sabhagi.....*

Gift of revered Rishipalita along with his sister.

(Poonacha 2011, 472)

188. *(U) pasakasa kadati yakhasa danam*

Pious gift of lay worshipper Yaskha kadati.

189. *Pusagutasa samatukasa sabhatukasa dana*

Pious gift of Pushyagupta along with his mother and brother.

190. *Koturakasa Utikasa matuya (danam)*

(Pious gift of) the mother of Utika from Kotura.

191. *Bo kana U (ta) sa ...to*

Fragmentary.

192. *Vanavasika (ya)*

Of Vanavasi. A fragmentary record.

193. *Se (ti) vayikaya Chulaya bhikhuniya dana (m).*

Pious gift of Chula, a nun of Setivayika (Srivatika).

194. *Gahpatino Chandaga putasa ...*

(Pious gift) of the son of Chandaga, a householder.

195. *Upasakasa Sama (na)kasa dana*

Pious gift of Sama (na)ka a lay worshipper.

196. *.. (da) matuya Isilaya danam pato*

The pious gift of (veneering) slab by Isila, mother of ...

197. *Danam pato*

Gift of veneering slab.

(b) Pushpagahanis (Pushpagrahini) (Flower receptacles)

198. *Puphagrahini pato danam*

Gift of flower receptacle (slab).

199. *Dhamakadhikhasa ... saha bhatu .. Nagabudhino*

(Gift of) Nagabudhi, a religious head (*dharmadyaksha*) along with his brother ..

200. *Na*

Fragmenatry.

201. *Kalathibakasa sa ...*

Fragmentary record. (Gift by) Kalathibaka.

202. ...*Budhino* ...

Fragmentary record. (Gift of) ... Budhi

203. *Puphagahana dana*

Pious gift of flower receptacle.

(Poonacha 2011, 473)

204. Kanhasirikaya puphagahani dana

Pious gift of flower receptacle by Kanhasirika.

205. *Keka ...kaya pu..*

Fragmentary record.

206. *Sidham Dhamakadhikasa Janagopi (sa) pa (to) da (na) dhamasa*

Success. Pious gift of slab by Janagopa, a religious head as an act of righteousness.

(Pious gift of slab depicting *dharma-chakra* by Janagopi, a religious head).

207. *Utaramitaya dana puphagahani visaya*

Pious gift of flower receptacle by Utaramita hailing from ... Visaya.

208. *Golaya dana*

Pious gift of dome (*anda*) slab.

209. *Ralasa saputakasa dana*

Pious gift ofrala along with his son.

210. *Pavayita (sa) Jitoya da (na) puphagahani dasaha*

Pious gift of 10 flower receptacles by Jita, a monk.

211. *Vedakasa upasakasa*

(Pious gift) by Vedakasa, a lay worshipper.

212. *Samaya puphagahani dana*

Pious gift of flower receptacle by Sama.

213. *Ghurikaya la daya sapu...*

Fragmentary. Not clear.

214. *Jethasa samanakasa sabhaginikasa sabhariya ...*

Pious gift of Jyeshtha, a monk along with his sister and wife.

215. *(Anteva)siniya Bodhisamaya deya dhama mahacheti bhikuniya Chulaka darika cha*

Meritorious gift of Bodhisama, the disciple of (name lost) to Chulakadarika a nun of the *maha-chaitya*.

216. .. *dasa dana*

Pious gift of .. *dasa*. The inscription is succeeded by Nandipada.

217. *Dhanyakatikaya Harapusa sa pato dana*

Pious gift of slab by Harapushya from Dhanyakataka. The inscription is preceded by a stylized *triratna*.

(Poonacha 2011, 474)

218. *Himalayasa Asabhutino matuya dana*

Pious gift of the mother of Asvabhuti from Himalayas.

219. ... *keya danam*

Pious gift of

220. *Dhanyakatakaya*

Dhanyakataka.

221. *ya dana*

Gift of

222. *Therana bhayata Mahamaritino antevasiniya Alakanhikaya*

piyasutaya cha mahachetiyaya deya dhama

Meritorious gift of flower receptacle by Alakanhika, a disciple of revered elder Mahamariti to the great *stupa* along with her beloved daughter.

223. *Dhamakadhikasa aya Kanha*

(Pious gift of) revered Kanha, a religious head.

224. *Pupha ... Budhhirakhita*

Pushpa Budharakshita.

225. *Lohasakasa Upasakasa*

(Pious gift of) Lohasaka, lay worshipper.

226. *Maya mahachetiya .. va (da) na*

Pious gift to the *maha-chaitya*.

227. *ta (ya) puphagahani danam*

Pious gift of the flower receptacle by ... (name of the donee lost).

228. *Dhanakatikaya yakha ...*

Near Eastern Ayaka, Gift of Yaksha from Dhanyakataka.

229. *Samaya upasikaya danam*

Pious gift by Sama, a female worshipper.

230. *Chidumughamatuya danam*

Pious gift by the mother of Chidumuga.

North of Eastern Ayaka

231. *Himasiriya dana*

Pious gift by Himasri, a female worshipper.

232. *Bhitinakamatuya Ghariya dana*

Pious gift of Ghariya mother of Bhitinaka.

(Poonacha 2011, 475)

South-west corner

233. *Yakha matuya pato danam*

Pious gift of slab by the mother of Yaksha.

Kept near Durga Temple

234. *Nasa danam*

Pious gift by ... nasa.

North of Western Ayaka

235. *Kupana rathikasa dana*

Pious gift by Kupana, a *rashtrika*.

236. *Nadasa u (pa) sakasa danam*

Pious gift of Nanda, a lay worshipper.

(a)Buddha-padas

Along the front edge

237. *Upasakasa (Ku) linakasa deya dhamma paya (pa) to*

This footprint slab is the meritorious gift by Kulinaka, a lay worshipper.

238. *Therana (bhaya) ta Budhatatana (a) tevasisa bha (ya) Sihaka*

pana (va) deyakasa deya dhama paya pat (o)

The meritorious gift of foot print slab by revered Simhaka (*Sihaka*) of the mountain branch (*pavadeyaka* = *parvateyaka* = *Haimavata?*) branch (of Buddhism) and the disciple of revered elder Budhatrata. Along the slanted edge of the circular ridge.

239. *Sidham Namobhagadeyadhama*

Fragentary.

(Poonacha 2011, 476)

4 (a) Upper drum (*Medhi*) – sculptured veneering

Inscriptions mentioning names of Royal personalities

240. *Raya Sudara Satakamni*

King Sundara Satakarni.

241. *Raya Maha Govido*

King Mahagovinda.

Jatakas

242. *Kumara a ...*

Prince A ... (rindama?)

243. *Jatakam Sudasomiyam*

Sutasoma Jataka.

244. *Nagaraya Mujulido*

Serpent king Mujulinda (Muchilinda).

245. *Bodhisato Kasaraya*

(Bodhisatva Kasiraya). Bodhisattva as king of Benaras.

246. *Ranamdo*

Fragmentary.

247. ... *yano Maya cha*

... yana and Maya (devi).

Anda Slabs

248. *Nagarakhitaya samayaya cha tharo ...*

(Gift) of string of slabs by Nagarakshita and Samaya.

249. *Kupana Rathikasa deya dha (ma)*

Meritorious gift of a Rashtrika from Kupana (or a meritorious gift from Kupana, a Rashtrika).

250. *Raghitasa dana tharo*

(Gift) of string of slabs by Raghita, (Rakshita).

Chhatradandas

251. *Sidham Namu Bhagavato*

Deya dhama chchata

Success. Salutations to the Lord. Meritorious gift of umbrella.

(Poonacha 2011, 477)

252. *Adholoka mahacheti*

Sacred great *chaitya* of the nether worlds.

253. *Amachiya Velinika (ya)*

deya dhama chhata

Meritorious gift of umbrella by Velinika, wife of a minister.

254. *1 ... gimha pakha 5*

2 ta Mahachetiye

(Gift of umbrella to the) *mahachaitya* during the summer of 5th (regnal) year of ...

255. ... *Siri-Yana Satakani*

.. ni Mehadatasa

(Gift of an umbrella by) Meghadatta (during the reign of) Sri Yajna Satakarni.

256. *Gimhanam*

..... danam chhata ...

....a.....

Gift of umbrella in the summer of ...

Stone bowl of offerings

257. .. *sakasa cha* ...

Fragmentary of upasaka (?) and ..

258. ... *da thubha*

.... *stupa* ..

Of Jega

Fragmentary.

260. (*Bh*) *ihkuniya Chula (ya)*

By nun Chula.

261. *Yiyana ta (pa)*

Obscure.

Votive Stupa

262. *Halibhichana Gatinokasa bhaya je .. upasikaya Gatiniya chetia karitam*

(This votive) stupa is got carved by Gatini, a nun and wife of Gatinoka, of Halibhichana family (?).

(Poonacha 2011, 478)

Tenon of a tabha

263. **Kamalalakhiyaya**

By Kamalakakhi (Lakshmi ?)

Dwarf pillar shafts found near STR-5

264. 1. Avesanisa bali ...

2. Mahanivasa bali ...

(Gifts of) Avesanii And 2. Mahanivasa ...

(Gift of) an architect or a foreman. The inscription on Sanchi Torana (south) gate on the top of the architrave facing the *stupa*. Gift of Ananda, son of Vasithi (Vasisthi) avesanin (rendered as the foreman of artisans) of the Raja Siri Satakarni. Akaya stambhas dedicated by Siddhartha, son of Nagachandra, both avesanins; avessa is stated to mean a workshop, atelier.

265 ... *Mahisekasa upasakasa*

(Gift of) a monk from Mahiseka

Coping member

266. ...*Danam..*

Gift by ...

267.*pataniyaya Sudhamaya saputika tadaba upasa (si) ...*

Gift of (name lost) along with his wife Sudhama and daughter, a nun ...

268. *Dhamasiriya pata danam*

The gift of slab by Dharmasri.

269. *Naganuga matuya*

Gift by the mother of Naganuga.

270. *Dhanakadakaya Yakha*

Gift of Yakshafrom Dhanyakataka.

(Poonacha 2011, 479)

23. Coins

Coins from Howell's excavation

Excavations and explorations at Sannati and its suburbs have yielded a large number of punch-marked coins, inscribed and uniscribed coins of lead, potin, copper and silver. A total of 79 coins in lead, copper and silver were reported by Howell from Sannati and its environs. Amongst these, 40 were located in stratified context from the mound at Anegutti, 36 from the unstratified deposits at Ranamandala and three were reported as surface finds in the village Sannati. These coins have been tabulated under 19 types and sub-types and ascribed to five Satavahana rulers. These include Satakarni -1; King Satavahana identified as Kumara Satavahana, son of Satakarni – 1; Sri Satakarni (Satakarni 2); Pulumavi – 1, son of Satakarni – 2; Vasishthiputra Pulumavi or Vasishthiputra Siva Siri Pulumavi. (Poonacha 2011, 569)

Coins from Poonacha's excavation

Number of coins - A total of 125 coins of circular, ovalish and square shape were retrieved from the excavation at Ranamandala habitation site (16) and the

Kanganahalli *stupa* site (109). Out of these 122 belong to the early historic period and three are of late medieval period. At both these sites the excavation has yielded coins in stratified context (Poonacha 2011, 569-570).

Conis from Ranamandala – Of the stratified coins from Ranamandala area, 14 are of lead and one each is of copper and potin. (Poonacha 2011, 570)

Conis from the stupa complex at Kanaganahalli – 48 lead, 20 potin and 7 copper coins retrieved from the site are inscribed and are of paramount importance in reaching a chronological sequence of different phases of structural activity in the stupa complex. Twenty-two coins of lead, copper and potin are worn out, mutilated and have incomplete legend. Amongst these coins, a few circular and square copper coins have symbols without any legend and are die-struck. (Poonacha 2011, 570)

Issuer of coins and symbols used - These coins were issued by Satavahana kings – Siri Satakarni, Pulumavi, Siva Siri Pulumavi and Yajna Satakarni. It is important to note that irrespective of the issuer king, all these coins bear the three-arched hill with or without a crescent above as the common imprint on the obverse along with the legend mentioning the name of the ruler in faint letters. The reverse has Ujjain symbol with or without pellets. (Poonacha 2011, 570)

Weight of coins – Irrespective of the metals used, the coins have been found to weigh between 2 to 4, 4 to 6, 6 to 8, 8 to 12 gm, and occasionally weigh 28 gm. On an average the circular coins range from 1.2 cm to 2.2 cm in diameter. (Poonacha 2011, 571)

Lead and copper coins – Lead coins occur in various shapes like circular, oval, rectangular and/or irregular and range in weight between 2 and 28 gm. The copper

alloy coins are square, rectangular and circular in shape and weigh between 2 and 12 gm.

Division of coins and symbols used – The three-arched hill is the most common symbol found on majority of the coins. The symbol may be with or without crescent and has prominent base line, sometimes with well struck triangular head followed by a straight or wavy river line. Other auxiliary symbols which normally occur on the obverse include animals such as Bull, Lion and Elephant; moon swastika and triangular-headed standards. The legend along the periphery is normally in an anti-clockwise direction but occasionally it occurs clockwise also. The reverse bears Ujjain symbol sometimes accompanied by *srivatsa*, *nandipada* and sun. The Ujjain symbol is depicted with single or double circles with elevated or flat pellets at the centre depending upon the die used for casting. (Poonacha 2011, 571)

Location of coins - The occurrence of the coins from the surface of hemispherical mound begins from an average depth of 0.20 m from the mound level in layer (2) and the concentration is maximum at a depth of 1.80 m and continues further below in lesser numbers. A higher percentage of coins are concentrated towards southeast and northwest of the *stupa*, near the respective entrances at north, south and west. (Poonacha 2011, 571)

Entry points to the stupa – There is a Yaksha bearing the bowl of offerings and also an epigraphical record, on the southern side over the eastern corner tabha, recording for the first time at Sannati about the cash grant of 800 karshpanas (athasatakahapanas) and 200 darana (dinars ?). The western entrance, the land approach from Sannati covering other important religious centres, also had a Yaksha sculpture installed at the northern entrance. Poonacha 2011, 571-572)

Typology of coins and rulers mentioned therein –

Square, silver punch-marked coin

Obverse – 1) Six spoked wheel at top right corner 2) Humped bull facing right within a rectangular frame to the left of the wheel 3) Sun 4) Moon 5) Peacock facing left over a hill along the bottom border.

Reverse – Diagonally struck Caduceus symbol.

This is an important coin and the only silver punch-marked coin retrieved from Kanaganahalli-Sannati area and seems to provide a firm basis for dating the habitation at Kanaganahalli-Sannati area to the pre-Asokan-Mauryan period. The Caduceus symbol, especially occurring as a prime reverse symbol, appears on the punch-marked coins of silver and copper of the Mauryan federal states during the pre-Asokan period and continues during Asokan and post-Asokan period. The symbols also appear in the coins found at Amaravati, Karimnagar, Gulbarga, Raichur, etc which are all within the core zone of the Satavahana empire consisting of Asika,-Mulaka-Asmaka region (Poonacha 2011, 572).

Circular uninscribed die-struck copper coins – 12 die-struck copper coins were recovered from the excavations. (Poonacha 2011, 572)

Coins of Maharathi Siri Satavahana - There are six coins of Maharathi Siri Satavahana, five retrieved from the stupa mound and one from Ranamandala from Sannati. Howell reported identical coins from Ranamandala. He attributed them to Kumara Satavahana, son of Satakarni 1, based on the main and auxiliary symbols on coins found in Nevasa and elsewhere. J. Varaprasada Rao attributed the coins to king Satavahana. I.K.Sarma attributed the coins to king Satavahana,

son of Sri Satakarni 1. In his opinion the three-arched hill is a territorial symbol. He maintains that Satavahana's rose to power in the three ancient zones of Asika-Asmaka-Mulaka in which northern Karnataka and the contiguous Andhra-Telangana areas fell. Their fortunes were linked with these three territories. King Satavahana, the second monarch, heralded the issue of the coin type with three-arch hill surmounted by the triangle-headed standard for circulation in Sannati area to impress on the conquered subjects the rise of the Satavahana power. The regions of northern Karnataka, its contiguous Telangana areas of Andhra, were wrested by this Satavahana king from a later Mauryan ruler or their provincial governor. According to A.M. Shastri Chimuka Satavahana himself was responsible for issuing alternately the coins mentioning him only as king Satavahana and the coins with both the legends i.e. Chimuka Satavahana and Satavahana have been reported from Kotilingala and Sanga Reddy in Karimnagar District of the Telangana region of Andhra Pradesh. The coins with the name Satavahana alone have been reported from numerous sites including Kondapur in Medak District of Andhra Pradesh, Nevasa in Ahmadnagar District, Junar in Pune District, Marathwada and Vidarbha regions of Maharashtra and from Sannati in Gulbarga District of Karnataka. Simuka-Chimukha is assigned a reign of 23 years unanimously in the Puranas. A major part of this period was spent in acknowledging the overlordship of Kanva. It was at the close of this period that he got rid of vassalage, declaring independence. In this background, the availability of the coins of king Siri Satavahana with the suffixes *Maharathi* and *Rajno* assume greater significance especially as they are from stratified context. It can be concluded that Siri Satavahana, identified with Kumara Satavahana, son of Satakarni 1 is Simuka-Chimuka Satavahana, founder of the Satavahana dynasty as per the Puranic texts. He issued coins in the vassal capacity under the Kanva with the legend *Maharathino Siri Satavahanasa* and after declaring independence, with

the royal epithet *Rajno* followed by the common name *Siri Satavahana* (pp.573-574).

Coins of Satakarni – Twenty five coins of Satakarni have been found from the excavations (Poonacha 2011, 574).

Coins of King Sri Satakarni – Most of the coins retrieved from Kanaganahalli excavation are of Sri Satakarni and they occur in lead and potin. Coins of copper are conspicuous by their absence (p.575).

Coins of Siva Siri Pulumavi - Eight coins of this ruler have been found, of which three are of potin and five are of lead (Poonacha 2011, 576).

Coins of Yajna Sri Satakarni – Four coins of Yajna Sri, the last powerful imperial ruler, have been found. Of these coins, three are of lead and one a potin coin (Poonacha 2011, 576).

Three-arched hill – The three-arched hill first used by the Mauryas is a significant symbol denoting the territorial features. It appears as a common denominator on the obverse of all the coins with the exception of a few die-struck coins in copper and silver punch marked coin. There is a possibility that the continuation in toto of this symbol of the Mauryas by the Satavahanas may suggest the mastery gained over the Mauryan territory of the southern periphery by the early Satavahana kings as evidenced by a few coins in which the restruck coins reflect a triangular headed standard superimposed on the three arched hills, especially of early Satavahana rulers (Poonacha 2011, 577).

Coin No. – KGH 001

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 19, 4

Depth in mts – 1.53

Find spot and short description – Northwest of *Mahachaitya* (outside)

Obv. Three-arched hill without crescent and with river line

Legend: Anticlockwise

Rajno Si ri Sa. ka ni sa

Rev: Faint Ujjain symbol

Coin No. – KGH 002

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 19, 4

Depth in mts – 1.65

Find spot and short description – N.W. of *Mahachaitya* (outside)

Obv: three-arched hill, crescent and river line

Legend: Anticlockwise

Rajno (Si). Sa ta kam ni sa

Rev: Ujjain symbol

Coin No. – KGH 003

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, Ovalish. 20, 4

Depth in mts – 1.30

Find spot and short description – East of south entrance towards brick apsidal *chaitya*.

Obv: Three-arched hill, crescent, wavy river line. Anticlockwise

Legend: *Rajno Si ri Sata ka ni*

Rev: Ujjain symbol

Coin No. – KGH 004

Issuing Authority – Indistinct

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 16, 2

Depth in mts – 1.40

Find spot and short description – East of brick apsidal *chaitya* towards south east of *Mahachaitya*.

Obv: Three-arched hill, crescent, river line

Legend: Anticlockwise, *Rajno*

Rev: Ujjain symbol

Coin No. – KGH 005

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, Squarish. 21x21, 4

Depth in mts – 1.35

Find spot and short description – Southwest of *Mahachaitya* near circular votive brick *stupa*

Obv: Three-arched hill, crescent

Legend: Anticlockwise

(Ra) jno Si (ri) Sa (ta) kamni

Rev: Ujjain symbol

(Poonacha 2011, 578)

Coin No. – KGH 006

Issuing Authority – Sri Satakarni ?

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 13, 2

Depth in mts – 1.65

Find spot and short description – North of western entrance

Obv: Three-arched hill, crescent, river

Legend: Anticlockwise

.... *ta ka*...

Rev: plain

Coin No. – KGH 007

Issuing Authority – Satakarni

Material/Shape/Size/Weight (in mm and gm) – Copper, Circular. 14, 4

Depth in mts – 1.85

Find spot and short description – Southeast of *Mahachaitya* near brick structure

Obv: Elephant moving to left. A tusker with a girdle at neck briskly moving with its extended trunk

Rev: Three-arched hill with a crescent. River symbol is absent

This coin is usually associated with the coin of Satakarni 1. Elephant uninscribed sub type.

Coin No. – KGH 008

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 15, 2

Depth in mts – 0.75

Find spot and short description – Near western entrance, outside the *pradakshina*

Obv: Three-arched hill, crescent, river line

Legend: Anticlockwise

.. *jna Si ri Sata (ka) (ni)*

Rev: Ujjain symbol

Coin No. – KGH 009

Issuing Authority – Satakarni - 1

Material/Shape/Size/Weight (in mm and gm) – Lead, Frag. 21, 4

Depth in mts – 1.90

Find spot and short description – South of eastern ayaka below the extant *pradkshina*

Obv: Symbol mutilated

Legend: Anticlockwise

Sa ta ka (ni) sa

Rev: Ujjain symbol; single circle with pellet

Coin No. – KGH 010

Issuing Authority - Indistinct

Material/Shape/Size/Weight (in mm and gm) – Lead. Circular. 23, 8

Depth in mts – 1.40

Find spot and short description – Southern entrance outside the *pradakshina*

Obv: Three-arched hill, clockwise *swastika*, river line

Rev: Faint Ujjain symbol

Coin No. – KGH 011

Issuing Authority – Sri Satakarni ?

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 19, 4

Depth in mts – 1.42

Find spot and short description – Southern entrance, outside the *pradakshina*

Obv: Three-arched hill, crescent, river line

Legend: Anticlockwise. Worn out except for *Si* and *Sa*

Rev: Faint Ujjain symbol

Coin No. – KGH 012

Issuing Authority – Die-struck

Material/Shape/Size/Weight (in mm and gm) – Copper. Circular. 22, 6

Depth in mts – 1.90

Find spot and short description – Southern entrance, outside the *pradakshina*

Obv: Three-arched hill and crescent, no river line; no legend

Rev: *Chatushpatha* mark

(Poonacha 2011, 579)

Coin No. – KGH 013

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 14, 2

Depth in mts – 1.50

Find spot and short description – South of eastern entrance

Obv: Three-arched hill and crescent

Legend: Anticlockwise

Rajno Siri Satakanisa

Rev: Faint Ujjain symbol

Coin No. – KGH 014

Issuing Authority – Indistinct

Material/Shape/Size/Weight (in mm and gm) – Lead. Circular. 20, 2

Depth in mts – 1.05

Find spot and short description – Northwest corner of the *stupa* outside the railing

Coin No. – KGH 015

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 18, 2

Depth in mts – 1.43

Find spot and short description – Northwest of northern entrance

Obv: Three-arched hill, river line and crescent

Legend: Anticlockwise

Rajno si (ri) (sa) (ta) ka ni sa

Rev: Ujjain symbol, two dotted circles

Coin No. – KGH 016

Issuing Authority - Satakarni

Material/Shape/Size/Weight (in mm and gm) – Potin, Mutilated. 14, 1

Depth in mts – 1.43

Find spot and short description – Northwest corner of the *Mahachaitya*

Obv: Worn out; faint traces of three-arched hill, crescent

Legend: Faint. Anticlockwise

.. (si) ..(ta) ka ni sa

Rev: Mutilated Ujjain symbol

Coin No. – KGH 017

Issuing Authority - Indistinct

Material/Shape/Size/Weight (in mm and gm) – Potin, Irregular. 15, 1

Depth in mts – 1.25

Find spot and short description – North of eastern entrance. Worn out

Coin No. – KGH 018

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 22, 6

Depth in mts – 1.25

Find spot and short description – Northwestern corner of the *Mahachaitya* outside the railing

Obv: Three-arched hill with crescent and river struck to the left of the coin

Legend: Anticlockwise

Obv: *Jna Si ri Sa ta kam ni (sa)*

Rev: Ujjain symbol

Coin No. – KGH 019

Issuing Authority - Indistinct

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 15, 2

Depth in mts – 1.60

Find spot and short description – Northwest corner of *Mahachaitya* outside the railing

Obv: Indistinct; three-arched hill

Rev: Very distinct Ujjain symbol with a five pettaled flower (?)

Coin No. – KGH 020

Issuing Authority – Die-struck

Material/Shape/Size/Weight (in mm and gm) – Copper, Square. 8x9, 1

Depth in mts – 1.80

Find spot and short description – Outside the railing to the west of northern entrance

Obv: Three-arched hill with crescent; river line missing (diagonally struck)

Rev: Ujjain symbol

(Poonacha 2011, 580)

Coin No. – KGH 021

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 16, 2

Depth in mts – 1.50

Find spot and short description – Northwest of *Mahachaitya* outside the railing

Obv: Prominent three-arched hill with crescent and river line

Legend: Anticlockwise

Rajno Si ri Sa (ta) kam ni (sa)

Rev: Worn out Ujjain symbol

Coin No. – KGH 022

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 17, 4

Depth in mts – 1.15

Find spot and short description – Northwest of western entrance outside

Obv: Three-arched hill with crescent. River line merged with periphery

Legend: *(Ra) jno Si ri Sa (ta) ...*

Rev: Ujjain symbol

Coin No. – KGH 023

Issuing Authority - Indistinct

Material/Shape/Size/Weight (in mm and gm) – Potin, Circular. 14, 1

Depth in mts – 1.75

Find spot and short description – North of western entrance (outside)

Obv: Worn out and details are lost

Rev: Faint Ujjain symbol

Coin No. – KGH 024

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 16, 2

Depth in mts – 0.45

Find spot and short description – New pillared promenade

Obv: Three-arched hill with crescent and river line

Legend: Anticlockwise

Ra jno Si ri Sa (kam) ni sa

Rev: Ujjain symbol struck to a side

Coin No. – KGH 025

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 21, 8

Depth in mts – 0.40

Find spot and short description – South of western entrance outside the railing

Obv: Three-arched hill with crescent and a river line. Extra metal around the periphery

Legend: *Ra jno Si ri Sa ta kam ni sa*

Rev: Prominent symbols with double circles with pellet

Coin No. – KGH 026

Issuing Authority - Indistinct

Material/Shape/Size/Weight (in mm and gm) – Copper, Circular.

Depth in mts – 0.55

Find spot and short description - Surface Persian coin

Coin No. – KGH 027

Issuing Authority - Indistinct

Material/Shape/Size/Weight (in mm and gm) – Potin, Circular. 13, 2

Depth in mts – 0.75

Find spot and short description – Northwest of western entrance

Obv: Three-arched hill with high orb crescent. The base line of the hill at distal ends appears like triangular serifs. Wavy river line

Rev: Faint Ujjain symbol with a circle and dot

(Poonacha 2011, 581)

Coin No. – KGH 028

Issuing Authority – Die-struck

Material/Shape/Size/Weight (in mm and gm) – Copper, Trapezoid. 18x15, 2

Depth in mts – 1.90

Find spot and short description – Above the extant pradakshina, Western *ayaka* platform

Obv: Diagonally struck three high arched hill with faint traces of a crescent. River line missing

Rev: Diagonally struck, worn out Ujjain symbol with double circles and a dot. Only one circle is clearly visible while the other three are faint

Coin No. – KGH 029

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 17, 2

Depth in mts – 1.00

Find spot and short description – North of western entrance outside the railing

Obv: High three-arched hill with a crescent placed slightly away from the hill. Straight river line

Legend: Anticlockwise begins at 4 o'clock and ends at 5 o'clock

... *Si (ri (Sa) ..ni sa*

Rev: Ujjain symbol with a single circle and prominent pellet

Coin No. – KGH 030

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, Ovalish. 14, 2

Depth in mts – 0.50

Find spot and short description – South west of western entrance near promenade pillars

Obv: Three-arched hill with prominent crescent and a faint river line. The periphery of the coin is pressed.

Legend: Anticlockwise; 4 o'clock to 5 o'clock

Ra jno Si Sa (ta) kam sa

Rev: Prominent Ujjain symbol with double circle and dot; two circles are edged into periphery

Coin No. – KGH 031

Issuing Authority – A Satavahana ruler

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 14, 2

Depth in mts – 1.30

Find spot and short description – Southeastern corner outside the railing

Obv: three-arched hill struck to bottom of the coin with a crescent with its horns curled outwards. River line missing

Legend: Anticlockwise

Si ri Sa

The letter *sa* gets into the crescent

Rev: Worn out Ujjain symbol with triangular headed standard. The single circle Ujjian symbol has over shot the periphery

(Poonacha 2011, 582)

Coin No. – KGH 032

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Potin, Circular. 18, 2

Depth in mts – 1.25

Find spot and short description – North of western entrance

Obv: Thick three-arched hill with crescent with the horns of crescent stretched towards periphery, struck to the right of the coin

Legend: Anticlockwise. Begins at 3 o'clock – 5 o'clock

Ra jno Si (ri) .. ni sa

Rev: Mis-struck Ujjain symbol with a double circle and prominent pellet. Only two circles are visible

Coin No. – KGH 033

Issuing Authority – Die-struck

Material/Shape/Size/Weight (in mm and gm) – Copper, Circular. 21, 12

Depth in mts – 1.60

Find spot and short description – West of northern entrance

Obv: Three-arched hill with a stretched crescent; river line absent. A worn out *swastika* atop the crescent closer to the periphery

Rev: Plain

The symbol on the obverse is somewhat in high relief due to the central lumping of the metal

Coin No. – KGH 034

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 17, 5

Depth in mts – 0.75

Find spot and short description – West of western entrance

Obv: Three-arched hill with a prominent crescent struck to a side. River line missing

Legend: Anticlockwise; begins at 4 o'clock – 11 o'clock

Raj no Si (Sa)

Rest of the legend from 11 o'clock upto 6 o'clock, if any, is lost in the periphery

Rev: Prominent Ujjain symbol with a circle and dot. While two circles are full the other two are imprinted half due to ill casting

Coin No. – KGH 035

Issuing Authority – Die-struck (indistinct)

Material/Shape/Size/Weight (in mm and gm) – Copper, Circular. 22, 8

Depth in mts – 1.60

Find spot and short description – East of northern votive *stupa*

Obv: Uniform three-arched hill and crescent; the arms of the crescent wider than usual

Rev: Prominent *Chatushpatha* symbol

(Poonacha 2011, 583)

Coin No. – KGH 036

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 22, 8

Depth in mts – 1.80

Find spot and short description – South east of *Mahachaitya* 25 cm below *pradakshina*

Obv: Well struck three-arched hill with a mutilated crescent at the top. The river line is thick

Legend: Anticlockwise extant from 11 o'clock to 5 o'clock

Sa ta kam ni sa

All the letters are bold and thick with prominent triangular heads for the vertical and horizontal strokes

Rev: Prominent Ujjain symbol with double circle with a dot. *Srivatsa* mark between two circles, partially smuged into the periphery. Alternating between them is faint *nandipada*

Coin No. – KGH 037

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Potin, Circular. 19, 4

Depth in mts – 0.85

Find spot and short description – North of northern entrance

Obv: Worn out slightly at the right periphery. Has three-arched hill with crescent; straight thin river line

Legend: Clockwise; begins at 8 o'clock and extant up to 4 o'clock

(Ra) (jno) Si ri Sa ta ka

The vertical limb of *ra* and *ka* are cursive and prominent triangular headed letters

Rev: Prominent Ujjain symbol with double circle and a central pellet and two *Srivatsa* marks, the apex of which are smudged into the periphery

Coin No. – KGH 038

Issuing Authority - Satavahana

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 16, 2

Depth in mts – 1.80

Find spot and short description – Northeastern corner of the apsidal *Chaitya*

Obv: Due to mutilation only two hillocks of the three-arched hill are seen with a thin river line. The extant basal line of the hillock at one side has prominent triangular head

Legend: Clockwise

Ra jno na sa

Rev: Ujjain symbol with double circle with prominent pellet

(Poonacha 2011, 584)

Coin No. – KGH 039

Issuing Authority - Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, pear-shaped. 17, 2

Depth in mts – 1.80

Find spot and short description – Northeastern corner of the apsidal *chaitya*

Obv: Three-arched hill with crescent with a thick base line. Thin straight river line merges with the strokes of the letter

Legend: the legend towards the right of coin is lost in the edged periphery from 8 o'clock to 12 o'clock. It is indistinct between 12 o'clock to 2 o'clock; the extant from 3 o'clock to 8 o'clock reads

Sata kam ni sa

Rev: Ujjain symbol with a single circle with thick bulged pellet

Coin No. – KGH 040

Issuing Authority – Yajna Satakarni

Material/Shape/Size/Weight (in mm and gm) – Potin, Circular. 16, 2

Depth in mts – 1.80

Find spot and short description – Northeastern corner of the apsidal *Chaitya*

Obv: Three-arched hill with crescent; river line slightly arched. The letters and symbol are stretched

Legend: Clockwise; the letters are thin and begin at 11 o'clock and end at 6 o'clock. The extant

clear legend begins at 11 o'clock near the right horn of the crescent and reads

(Si) (ri) ya jna Sa (ta)

Rev: Ujjain symbol with a circle and a large dot slightly elevated. The quality of the coin is inferior

Coin No. – KGH 041

Issuing Authority - Indistinct

Material/Shape/Size/Weight (in mm and gm) – Potin, Circular. 17, 2

Depth in mts – 1.80

Find spot and short description – Northeastern corner of the apsidal *Chaitya*

Obv: Three-arched hill with crescent; thin river line close to the periphery

Rev: Ujjain symbol with double circles with a central pellet

(Poonacha 2011, 585)

Coin No. – KGH 042

Issuing Authority – Yajna Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead alloy, Circular. 16, 2

Depth in mts – 1.80

Find spot and short description – Northeastern corner of the apsidal *Chaitya*

Obv: Three-arched hill with a fairly thick base line with crescent at the top with its horns slightly turned towards 1 o'clock

Legend: Clock wise; due to ill casting two letters are unusually large; Begins at 7 o'clock and abruptly ends at 12 o'clock.

Ya jna Si ri

Rev: Ujjain symbol with single circle and central bulged pellet

Coin No. – KGH 043

Issuing Authority – Siri Pulumavi

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 16, 2

Depth in mts – 1.80

Find spot and short description – Northeastern corner of the apsidal *Chaitya*

Obv: Thick lined three-arched symbol with crescent. Prominent base line for hillock; the distal ends are of triangular head. River line smuged into the

periphery. When compared to the characters of the legend, the symbol is smaller in size

Legend: Clockwise; begins at 11 o'clock and ends at 4 o'clock

Si ri pu lu

Rev: Ujjain symbol with double circle and dot

Coin No. – KGH 044

Issuing Authority – Siva Siri Pulumavi

Material/Shape/Size/Weight (in mm and gm) – Lead, circular. 17, 2

Depth in mts – 1.80

Find spot and short description – Obv: Thick lined, three arched hill symbol with crescent. Prominent base line for hillock; the distal ends are of triangular head. River line slightly curved downwards. When compared to the characters of the legend, the symbol is smaller in size

Legend: Clockwise; begins at 9 o'clock and ends at 5 o'clock

Si va Si ri pu lu

Rev: Prominent Ujjain symbol with double circle and dot

(Poonacha 2011, 586)

Coin No. – KGH 045

Issuing Authority - Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular.

Depth in mts - 1.80

Find spot and short description – Northeastern corner of the apsidal Chaitya

Obv: Thick lined, three-arched hill symbol with crescent. Prominent base line for hillock, the distal ends are of triangular head. Riverline slightly curved

downwards. When compared to the characters of the legend, the symbol is smaller in size

Legend: Anticlockwise; begins at 4 o'clock and ends at 5 o'clock

Ra jno Si ri Sa ta kam ni sa

Rev: Ujjain symbol with double circle and dot. Worn out *srivatsa* and *nandipada*.
Ujjain struck to a side

Coin No. – KGH 046

Issuing Authority - Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, circular. 28, 10

Depth in mts – 1.80

Find spot and short description – *Mahastupa*, below railing

The symbol and legend is struck to the right side of coin and left side is worn out

Obv: Three-arched hill slightly stretched with river line at the base. Crescent worn out

Legend: Anticlockwise; begins at 11 o'clock and ends at 5 o'clock.

Sa ta kam ni sa

Rev: Ujjain symbol with double circle and central prominent pellet struck to a side

Coin No. – KGH 047

Issuing Authority - Pulumavi

Material/Shape/Size/Weight (in mm and gm) – Lead, Oval. 19, 2

Depth in mts – 1.80

Find spot and short description – Northeastern corner of the apsidal *Chaitya*

Mis-struck coin blank between 9 o'clock to 12 o'clock

Obv: Three-arched hill with prominent base line with left distal end with triangular haed. The crescent atop is smudged

Legend: Clockwise; the legend is smudged between 9 and 12 o'clock and between 4 and 7 o'clock. The extant legend reads *Si, pu, lu, ma, vi, sa*

Rev: Prominent Ujjain symbol with only two lobes struck with double circle and dot

(Poonacha 2011, 587)

Coin No. – KGH 048

Issuing Authority – Siva Siri Pulumavi

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 19, 2

Depth in mts – 1.80

Find spot and short description – Northeastern corner of the apsidal *Chaitya*

Obv: Diagonally struck symbol tilted slightly between 12-1 o'clock

Three arched hill with cresecent. Thick base line. Riverline slightly curved and incomplete

Legend: Clockwise, smudged between and 4 and 8 o'clock. The extant between 9 to 4 o'clock reads

Ra jno Siva Siri Pu lu

Rev: Ujjain symbol with only two lobes with double circle and dot. Third is partially seen in the periphery

Coin No. – KGH 049

Issuing Authority – Yajna Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 15, 2

Depth in mts – 1.80

Find spot and short description – Northeastern corner of the apsidal *Chaitya*

Obv: Faint impression of stretched, three-arched hill with crescent. Prominent base line with distal ends with triangular heads. The river line merged into the periphery

Legend: Clockwise; extant between 11 o'clock to 3 o'clock

Si ri Yajna

Rev: Two lobes of worn out Ujjain symbol with double circle and dot

Coin No. – KGH 050

Issuing Authority - Indistinct

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 18, 4

Depth in mts – 1.80

Find spot and short description – Northeastern corner of the apsidal *Chaitya*

Obv: Indistinct

Rev: Faint impression of Ujjain symbol

Coin No. – KGH 051

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 16, 2

Depth in mts – 1.80

Find spot and short description – Northeastern corner of the apsidal *Chaitya*

Obv: Three arched hill with crescent. Faint river line at the base

Legend: Anticlockwise; extant between 4 o'clock to 1 o'clock. Legend between 12 o'clock to 6 o'clock not imprinted due to ill casting.

Ra jno .. blank (ni)

On the basis of the top serif of the letter *ni* the coin is assigned to king Sri Satakarni

Rev: Prominent impression of unusually large Ujjain symbol. While one lobe is clear the other two are struck near the periphery

(Poonacha 2011, 588)

Coin No. – KGH 052

Issuing Authority – Siva Siri Pulumavi

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 17, 2

Depth in mts – 1.80

Find spot and short description – Northeastern corner of the apsidal *Chaitya*

Obv: Three-arched hill with prominent crescent. The distal ends of the prominent base line with nail head. Wavy river line smudged to periphery

Legend: Clockwise, begins at 7 o'clock and ends at 3 o'clock

Ra jno Si va Si ri Pu lu

Rev: Prominent impression of well struck Ujjain symbol with an elevated single circle and a pellet

Coin No. – KGH 053

Issuing Authority – Yajna Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, pear. 17, 2

Depth in mts – 1.80

Find spot and short description – Northeastern corner of the apsidal *Chaitya*

The otherwise circular coin has assumed pear shape due to edging and mutilating the legend

Legend: Clockwise; extant legend begins at 11 o'clock and ends at 5 o'clock

Ya jna Sa ta kam

Rev: Prominently struck Ujjain symbol with single circle and central bulged pellet and parts of the other two

Coin No. – KGH 054

Issuing Authority - Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 16, 2

Depth in mts – 1.80

Find spot and short description – Northeastern corner of the apsidal *Chaitya*

Obv: Three-arched hill with crescent almost touching the periphery. The river line is slightly away from the base line

Legend: Clockwise. The edging of the coin has lost $\frac{1}{4}$ of the legend along the periphery

Begins at 8 o'clock and ends at 7 o'clock;

Ra jno Si ri Sa ta kam ni sa

Rev: Prominent large Ujjain symbol worn out; single circle with pellet

(Poonacha 2011, 589)

Coin No. – KGH 055

Issuing Authority - Pulumavi

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 17, 2

Depth in mts – 1.80

Find spot and short description – Northeastern corner of the apsidal *Chaitya*

Obv: Three-arched hill with crescent slightly away from the hill. Wavy base line and a wavy river line. The characters of the legend are larger than the symbol

Legend: the legend between 7 o'clock to 12 o'clock smudged and not clear; the extant legend between 1 o'clock to 3 o'clock

(Si) (ri) pu du

Rev: Prominent Ujjain symbol struck to periphery. The central pellet of one of the single circles is smudged

Coin No. – KGH 056

Issuing Authority - Satakarni

Material/Shape/Size/Weight (in mm and gm) – Potin, Circular. 19, 2

Depth in mts – 1.80

Find spot and short description – Northeastern corner of the apsidal *Chaitya*

The coin is slightly ovalish due to its pressing from sides when it was still wet

Obv: Three-arched hill with crescent and straight river line mis-struck slightly to left of the coin.

Legend: Clockwise; begins at 8 o'clock and ends at 7 o'clock. The letters are of medium size and in *Rajno* somewhat thinner in comparison to the other letters

Ra jno Si. Kam ni sa

Rev: Prominent Ujjain symbol struck to centre. Single circle with pellet

(Poonacha 2011, 590)

Coin No. – KGH 057

Issuing Authority – Shiv Siri Pulumavi

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 17, 2

Depth in mts – 1.80

Find spot and short description – Northeastern corner of the apsidal *Chaitya*

The coin is slightly mutilated at the periphery between 12 o'clock and 3 o'clock

Obv: Bold, three-arched hill with crescent and a prominent base line with its two distal ends with triangular head. Straight river line. The horns of the crescent are more than half of a circle.

Legend: Clockwise; begins at 8 o'clock and ends at 7 o'clock. The extant legend

Ra jno Si (va) (si) (ri) Pu (lu) (ma) vi sa

The letters are bold and well written

Rev: Prominent mutilated Ujjain symbol with double circle and central pellet

Coin No. – KGH 058

Issuing Authority – Shiv Siri Pulumavi

Material/Shape/Size/Weight (in mm and gm) – Potin, Circular. Mutilated

Depth in mts – 1.80

Find spot and short description – Northeastern corner of the apsidal *Chaitya*

Mutilated between 6 and 9 o'clock in which the legend is lost in the periphery. Due to the softness of the metal the coin is somewhat ovalish

Obv: Three-arched hill with crescent in the centre with a firm base line, the ends of which are triangular headed

Legend: Clockwise. The extant legend from 9 o'clock to 2 o'clock

(Ra) Jno Si (va) (si) (ri) Pu

Rev: Mis-struck Ujjain symbol with a single circle with a central pellet

(Poonacha 2011, 591)

Coin No. – KGH 059

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Potin, Circular. 16, 2

Depth in mts – 1.80

Find spot and short description – Northeastern corner of the apsidal *Chaitya*

Obv: Three-arched hill with crescent and river line

Legend: Clockwise; begins at 8 o'clock and ends at 7 o'clock. Due to edging of the coin, the top serifs and some letters are mutilated

Ra Jno (Si) (ri) (Sa) (ta) kam ni (sa)

Rev: Bold Ujjain symbol; two are set to periphery and one is clearly visible

Coin No. – KGH 060

Issuing Authority – Satakarni

Material/Shape/Size/Weight (in mm and gm) – Potin, Ovalish. 21, 5

Depth in mts – 1.80

Find spot and short description – Northeastern corner of the apsidal *Chaitya*

Obv: Three-arched hill stretched along with crescent

Legend: Anticlockwise

... *Sa. ka ni*

Rev: Distorted Ujjain symbol with single circle and a central pellet

Coin No. – KGH 061

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Potin, Circular. 20, 4

Depth in mts – 1.80

Find spot and short description – Northeastern corner of the apsidal *Chaitya*

Obv: Three-arched hill with crescent and river line

Legend: Begins at 7 o'clock and ends at 4 o'clock. Only the vertical limbs of the mutilated letters are visible. Extant legend

(Ra) (jno) (Si) ri (Sa) ka ni sa

Rev: Large well struck Ujjain symbol. Double circles with a central pellet are prominent

(Poonacha 2011, 592)

Coin No. – KGH 062

Issuing Authority – Satakarni

Material/Shape/Size/Weight (in mm and gm) – Copper, Mutilated, Square.

17x17, 2

Depth in mts – 1.98

Find spot and short description – Southeastern corner of *ayaka* below *pradakshina*. Square copper coin appears to be restruck

Obv: Three-arched hill with traces of ill-struck crescent atop with river line at the base

Legend: Anticlockwise. Due to improper casting only the top serifs of letter *sa*, *ta* and *ka* are visible, letter *ri* is prominent

Rev: Two symbols of faint Ujjain over struck diagonally with triangular headed standard in a circular punch. The force of punch has split the coin at the periphery

Coin No. – KGH 063

Issuing Authority – Indistinct

Material/Shape/Size/Weight (in mm and gm) – Copper, Circular. 14, 2

Depth in mts – Surface

Find spot and short description – Unstruck coin. Highly worn out

Coin No. – KGH 064

Issuing Authority – Indistinct

Material/Shape/Size/Weight (in mm and gm) – Copper, Square. 12x12, 2

Depth in mts – 1.78

Find spot and short description – Near Southern entrance

Obv: Diagonally struck, worn out three-arched hill with prominent crescent

Rev: Diagonally mis-struck. Triangular headed standard

Coin No. – KGH 065

Issuing Authority – Indistinct

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 18, 2

Depth in mts – 0,45

Find spot and short description – Near Circular brick structure at southwest
Slightly ovalish

Obv: Worn out

Rev: Faint traces of Ujjain symbol. Only two circles with dots are seen

Coin No. – KGH 066

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 21, 10

Depth in mts – 1.15

Find spot and short description – Southeast of southern entrance. Well struck
coin, the symbols and legend are worn out due to usage

Obv: Three-arched hill with crescent and river line

Legend: Anticlockwise begins at 3 o'clock and ends at 5 o'clock; the extant legend
Ra jo Si ri Sa .. ka ni sa

Rev: Well struck Ujjain symbol with double circle and pellet; the distal ends of
two circles are worn out

(Poonacha 2011, 593)

Coin No. – KGH 067

Issuing Authority – Maharathi Siri Satavahana

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 23, 10

Depth in mts – 1.45

Find spot and short description – Southeast of southern entrance. Well struck large circular, partially mutilated coin

Obv: Three–arched hill with crescent and river line, inverted triangular headed standard inserted into the horns of the crescent and a *nandi-pada* to the right of the crescent. The river line merges with the periphery; the triangular standard symbol is crackled

Legend: Clockwise begins at 7 o'clock and ends at 4 o'clock;

Ma ha ra thi sa Si ri Sa ta va ha (na) sa

Rev: Ujjain symbol set in a double line square

Coin No. – KGH 068

Issuing Authority – Indistinct

Material/Shape/Size/Weight (in mm and gm) – Lead, Mutilated. 17, 2

Depth in mts – 1.30

Find spot and short description – West of southern entrance.

Obv: Three–arched hill with crescent and a straight river line merged into the periphery

Legend: Clockwise, is lost due to edging of the coin. However, letter *sa* at 10 o'clock is visible

Rev: A large Ujjain symbol, a double circle and dot. Except one circle, the rest are partially struck

Coin No. – KGH 069

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Potin, Circular. 16, 2

Depth in mts – 1.35

Find spot and short description – Near southern *chandrasila*

Obv: Three-arched hill with a crescent

Legend: Anticlockwise; the riverline and left of the coin between 4 o'clock to 3 o'clock smudged at the periphery. The extant legend between 2 o'clock to 6 o'clock

Si (ri) sa ..ka ni

Rev: Faint Ujjain symbol

Coin No. – KGH 070

Issuing Authority – Indistinct

Material/Shape/Size/Weight (in mm and gm) – Potin, mutilated. 15, 2

Depth in mts – 1.56

Find spot and short description – North of western entrance. Mutilated coin.

Obv: Three-arched hill with crescent at the top and river line

Legend: Not clear

Rev: Ujjain symbol slightly stretched

(Poonacha 2011, 594)

Coin No. – KGH 071

Issuing Authority – Inscribed

Material/Shape/Size/Weight (in mm and gm) – Potin, Mutilated. 15, 2

Depth in mts – 1.63

Find spot and short description – Near western entrance. The left of the coin is mutilated.

Obv: Three-arched hill with crescent; no river line

Legend: Clockwise; only letter *sa* is discernible

Rev: Large Ujjain symbol. Only two distals are seen

Coin No. – KGH 072

Issuing Authority – Indistinct

Material/Shape/Size/Weight (in mm and gm) – Potin, Circular. 11, 2

Depth in mts – 1.30

Find spot and short description – North east of eastern entrance

Obv: Worn out three–arched hill and river line. The legend and the crescent of the symbol are smudged in the periphery

Rev: Single circle with a central pellet of Ujjain symbol

Coin No. – KGH 073

Issuing Authority – Inscribed

Material/Shape/Size/Weight (in mm and gm) – Copper, Square. 19x19, 4

Depth in mts – 1.70

Find spot and short description – Near southwest corner of apsidal *Chaitya*

Obv: Worn out symbol of three–arched hill with crescent and river line

Legend: Clockwise; only *Sa* of the legend at 10' clock visible

Rev: Faint Ujjain symbol with central large pellet in the circle is visible

Coin No. – KGH 074

Issuing Authority – Indistinct

Material/Shape/Size/Weight (in mm and gm) – Copper, Square. 9x9, 2

Depth in mts – 1.60

Find spot and short description – West of southern *chandrasila*

Obv: Three–arched hill with crescent and river line diagonally struck

Rev: Ujjain symbol with only two circles with pellet are seen; near one of the circles the symbol of sun (?) is struck

Coin No. – KGH 078

Issuing Authority – Die-struck

Material/Shape/Size/Weight (in mm and gm) – Copper, Square. 15x14, 2

Depth in mts – 0.45

Find spot and short description – Near pillared promenade, southwest of *Mahachaitya*

Obv: Worn-out three-arched hill with crescent

Legend: Indistinct

Rev: Faint impression of Ujjain symbol

Coin No. – KGH 079

Issuing Authority – Indistinct

Material/Shape/Size/Weight (in mm and gm) – Copper, Square. 12x12, 2

Depth in mts – 1.20

Find spot and short description – Northeast of eastern *ayaka*

The mis-struck coin does not have any clear impressions

(Poonacha 2011, 595)

Coin No. – KGH 080

Issuing Authority – Indistinct

Material/Shape/Size/Weight (in mm and gm) – Copper, Square. 17x15, 4

Depth in mts – 1.74

Find spot and short description – Near western *chandrasila*

Obv: Indistinct

Rev: Faint Ujjain symbol

Coin No. – KGH 081

Issuing Authority – Indistinct

Material/Shape/Size/Weight (in mm and gm) – Silver, Square. 12x13, 4

Depth in mts – 2.20

Find spot and short description – Punch marked coin southeast of southern entrance *ayaka*

Obv: (1) Six spoked wheel at top right corner (2) Humped bull facing right within a rectangular frame to the left of the wheel (3) Sun (4) Moon (5) Peacock facing left over a three-arched hill along the bottom border

Rev: Diagonally struck. Caduceus symbol

This is a very significant coin and the only silver punch-marked coin retrieved from Kanaganahalli-Sannati area so far and appears to provide a firm basis for dating the habitation at Kanaganahalli (Sannati) area to the pre-Asokan-Mauryan context. The Caduceus symbol, especially occurring as a single reverse symbol, appears on the coins of copper and silver punch-marked coins of Mauryan federal states during the pre-Asokan times and continues during Asokan and post-Asokan period. The symbols also appear on the coins discovered at Amaravati, Karimnagar, Gulbarga, Raichur, etc. the core zone of Satavahana empire comprising Asika-Mulaka-Asmaka region.

(Poonacha 2011, 596)

Coin No. – KGH 082

Issuing Authority – Indistinct

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 22, 8

Depth in mts – 0.85

Find spot and short description – North of apsidal *Chaitya*

Obv: Three-arched hill

Rev: Details are lost

Coin No. – KGH 083

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 18, 6

Depth in mts – 0.95

Find spot and short description – Near northern entrance

Obv: Well struck three-arched hill with cresecent

Legend: Indistinct. And river line

Anticlockwise; the legend between 4 o'clock to 8 o'clock smudged. The extant legend

Ra jno Si ri Sata

Could be that of Satavahana or Satakarni

Rev: Impression of Ujjain symbol with only two distals clearly visible and the other two smudged to periphery

Coin No. – KGH 084

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 18, 4

Depth in mts – 0.90

Find spot and short description – North of northern entrance

The mis-struck coin has lost its legend along the left periphery

Obv: The symbol of three-arched hill, crescent and river line struck towards left of the coin. The distal ends of the base line are with nail heads. River line is curved

Legend: Anticlockwise; begins at 3 o'clock and ends at 5 o'clock

Jno Si ri Sa ta kam ni (sa)

Rev: Well struck Ujjain symbol with double circle and central pellet. The symbol is struck to the right of coin

Coin No. – KGH 085

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 23, 8

Depth in mts – 0.28

Find spot and short description – Near eastern *chandrasila*

Obv: Three-arched hill with crescent atop and a river line below

Legend: Anticlockwise; begins at 4 o'clock and ends at 5 o'clock

Ra jno Si ri Sa ta kam ni sa

Rev: Prominent Ujjain symbol with double circle and pellets and *Srivatsa* intersecting the distals

(Poonacha 2011, 597)

Coin No. – KGH 086

Issuing Authority – Sri Satavahana

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 25, 12

Depth in mts – 0.48

Find spot and short description – South of western entrance

Obv: Three-arched hill with crescent atop and a wavy river line below

Legend: Anticlockwise; begins at 11 o'clock and ends at 1 o'clock

Ra jno Si ri Sa da va ha na sa

The impression of a heavy ledge is seen along the bottom of the coin

Rev: Well-struck Ujjain symbol with single circle and a pellet and the symbol is struck to a side leaving 3/4th of the space blank. One of the distals at the bottom has an improperly struck sun

Coin No. – KGH 087

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 25, 8

Depth in mts – 0.40

Find spot and short description – Near northern entrance

The well struck coin with smudged periphery

Obv: The symbol of three-arched hill, crescent and river line struck towards upper side of the coin. The distal ends of the base line are of nail heads. River line is wavy

Legend: Anticlockwise; begins at 3 o'clock and ends at 6 o'clock

(Ra) (Jno) Si ri Sa ta kam ni

Rev: Well struck Ujjain symbol with double circle and central pellet. The symbol is struck, mutilated with a crack line

Coin No. – KGH 088

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 25, 10

Depth in mts – 0.50

Find spot and short description – Near eastern *chandrasila*

Obv: Three-arched hill with crescent atop and a wavy river line below

Legend: Anticlockwise; begins at 2 o'clock and ends at 6 o'clock

Si ri Sa ta kam ni

Rev: Prominent Ujjain symbol with double circle and pellets and two distals are slightly smudged and part of the sun symbol

(Poonacha 2011, 598)

Coin No. – KGH 089

Issuing Authority – Siva Sri Pulumavi

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 17, 2

Depth in mts – 0.45

Find spot and short description – South of western entrance. Worn out coin

Obv: Three-arched hill with crescent atop and a straight river line below struck to the left

Legend: Clockwise. Most of it is lost, mutilated all along the left periphery.

Begins at 7 o'clock and ends at 12 o'clock

Ra jno Si va

Rev: Ujjain symbol with double circle and a pellet; two distals are seen

Coin No. – KGH 090

Issuing Authority – Indistinct

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 18, 4

Depth in mts – 0.50

Find spot and short description – Northern entrance

The ill struck coin has lost its river line due to edging along the periphery

Obv: Three-arched hill, prominent crescent and river line struck towards lower side of the coin

Legend: Anticlockwise; begins at 3 o'clock and ends at 9 o'clock

Si ri Sa

Rev: Worn out Ujjain symbol with double circle and central pellet

Coin No. – KGH 091

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 19, 6

Depth in mts – 0.18

Find spot and short description – Near eastern *chandrasila*

The ill-struck coin has lost its river line due to edging along the periphery

Obv: Faint three-arched hill. Worn out crescent and river line struck towards lower side of the coin

Legend: Anticlockwise; begins at 2 o'clock and ends at 9 o'clock

Si ri sa

Rev: Worn out faint Ujjain symbol with double circle and central pellet

Coin No. – KGH 092

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 17, 2

Depth in mts – 0.24

Find spot and short description – South of southern entrance

Obv: Three-arched hill with crescent atop and a straight river line below

Legend: Anticlockwise; begins at 4 o'clock and ends at 6 o'clock

(Ra) jno Si ri Sa ta kam ni

Rev: Very well struck Ujjain symbol with double circle and a pellet and the symbol of sun

(Poonacha 2011, 599)

Coin No. – KGH 093

Issuing Authority – Indistinct

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 17, 2

Depth in mts – Surface

Find spot and short description – Highly worn out

Coin No. – KGH 094

Issuing Authority – Indistinct

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 18, 4

Depth in mts – 0.38

Find spot and short description – Near eastern *chandrasila*. Worn out

Coin No. – KGH 097

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 19, 6

Depth in mts – 0.18

Find spot and short description – Near eastern *chandrasila*

Obv: Three-arched hill with crescent atop and a faint wavy river line below

Legend: Anticlockwise; begins at 11 o'clock and ends at 7 o'clock

Sa ta kam

Rev: Ujjain symbol with a fairly unstuck periphery with three distal ends with a circle and dot. The fourth is worn out

Coin No. – KGH 098

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 25, 8

Depth in mts – 1.95

Find spot and short description – South of southern entrance

Obv: Three-arched hill with crescent, straight river line

Legend: Anticlockwise; it is smudged between 9 o'clock to 1 o'clock. In spite of smudging it can be read; begins at 4 o'clock and ends at 5 o'clock

(Ra) jno Si (ri) Sa (ta) kam ni sa

Rev: Well struck Ujjain symbol with double circle and a pellet. One of the distals is worn out

Coin No. – KGH 099

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Potin, Circular. 20, 4

Depth in mts – 0.25

Find spot and short description – Near apsidal brick *Chaitya* at southwest

Obv: Three-arched hill, crescent at the top. River line smudged into the periphery

Legend: Anticlockwise; begins at 2 o'clock and ends at 8 o'clock. Extant legend

Si ri Sa ta

Rev: Ujjain symbol with double circle and dot; symbol of sun edged onto the periphery

(Poonacha 2011, 600)

Coin No. – KGH 100

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 23, 6

Depth in mts – 0.22

Find spot and short description – Near eastern entrance of *Mahachaitya*

Slightly worn out and the details are clustered due to ill casting

Obv: Three-arched hill with crescent and a wavy river line

Legend: Anticlockwise; begins at 4 o'clock and ends at 5 o'clock

Ra jno Si ri Sa ta kam ni

Rev: Details are lost

Coin No. – KGH 101

Issuing Authority – Indistinct

Material/Shape/Size/Weight (in mm and gm) – Potin, Circular. 18, 2

Depth in mts – 0.35

Find spot and short description – Southern entrance of *Mahachaitya*

Obv: Three-arched hill with crescent atop and a straight river line below with triangular heads at distal ends

Legend: Anticlockwise; worn out

Rev: Well struck Ujjain symbol with double circle and a pellet. One is into the periphery

Coin No. – KGH 102

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Potin, Circular. 19, 4

Depth in mts – 0.25

Find spot and short description – Near apsidal brick *Chaitya* at southwest

Obv: Three-arched hill with crescent at the top. River line smudged into the periphery

Legend: Anticlockwise; begins at 3 o'clock and ends at 5 o'clock. Extant legend

Ra jno Si ri Sa ta kam ni sa

Rev: Ujjain symbol with double circle and dot; symbol of sun edged onto the periphery. Sufficient blank space

Coin No. – KGH 103

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Potin, Circular. 23, 6

Depth in mts – 0.30

Find spot and short description – Near southern entrance of *Mahachaitya*

Slightly worn out and the details are struck slightly upwards leaving a prominent periphery at the base

Obv: Three-arched hill with crescent and a straight river line. The horns of crescent are cut in the periphery

Legend: Anticlockwise; begins at 3 o'clock and ends at 5 o'clock;

(Ra) (jno) (Si) (ri) Sa ta kam ni sa

Rev: Compact well struck Ujjain symbol with double circle and dot; symbol of *srivatsa* alternates. One of the distals of the Ujjain symbol has the sun symbol (Poonacha 2011, 601)

Coin No. – KGH 104

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Potin, Circular. 18, 2

Depth in mts – 0.28

Find spot and short description – Southern entrance. Slightly worn out coin with the legend between 4 o'clock to 1 o'clock smudged

Obv: Three-arched hill with crescent atop and a straight river line

Legend: Anticlockwise;

Rajno Si (ri) Sa ta kam ni sa

Worn out slightly

Rev: Ujjain symbol with double circle and a pellet. One is into the periphery

Coin No. – KGH 105

Issuing Authority – Indistinct

Material/Shape/Size/Weight (in mm and gm) – Potin, Circular. 20, 2

Depth in mts – 0.20

Find spot and short description – Near apsidal brick *Chaitya* at southwest

Obv: Faint three-arched hill

Rev: worn out

Coin No. – KGH 106

Issuing Authority – Sri Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 25, 8

Depth in mts – 0.30

Find spot and short description – Near southern *ayaka*

Slightly irregular in shape and the details are struck slightly towards left

Obv: Three-arched hill with crescent and a straightish river line

Legend: Anticlockwise; begins at 3 o'clock and ends at 5 o'clock;

(Ra) (jno) Si (ri) Sa ta kam ni sa

Rev: Ujjain symbol with double circle and dot; symbol of *srivatsa* alternates. One of the distals of the Ujjain symbol is worn out

Coin No. – KGH 107

Issuing Authority –Satakarni

Material/Shape/Size/Weight (in mm and gm) – Potin, Circular. 15, 1

Depth in mts – 1.28

Find spot and short description – Near southeastern apsidal *Chaitya* entrance

Obv: Mis-struck coin with the legend between 4 o'clock to 1 o'clock smudged; only two orbs of lower hillock seen; crescent shifts angularly towards 11 o'clock.

River line missing

Legend: Anticlockwise;

Sa ta kam ni

Worn out slightly

Rev: Ujjain symbol with double circle and a pellet. One distal has sun symbol

(Poonacha 2011, 602)

Coin No. – KGH 108

Issuing Authority –Satakarni

Material/Shape/Size/Weight (in mm and gm) – Potin, Circular. 15, 2

Depth in mts – 1.75

Find spot and short description – Near railing below extant *pradakshina* nearer to apsidal brick *Chaitya* at south east

Obv: Faint three-arched hill. Mutilated. Wavy river line

Legend: Anticlockwise; extant between 8 o'clock to 6 o'clock

Kam ni sa

Rev: Worn out

Coin No. – KGH 109

Issuing Authority – Indistinct

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 22, 14

Depth in mts – 1.90

Find spot and short description – Inside the central core trench

Obv: Mis-struck bull to left. The legs are worn out

Rev: Faint traces of tree in the railing

Coin No. – SAN 8

Issuing Authority – Sri Satavahana

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 14, 2

Depth in mts – 1.00

Find spot and short description – The coin at its centre has a single arch set with a cross atop. To the left of the cross, three-arched hill with a crescent is shown, of which, the crescent of the arched hill and the second hill at the bottom are obliterated. The cross at top also has a crescent along the periphery. The legend begins at 4 o'clock of the circle and stops below the *swastika* at right. The legend

Si ri sa ta va (ha) (na) (sa)

Obv: The vowel indicator *i* of *Si* is obliterated and faintly seen and the lower limb of *ha* partially visible. Lower limb of letter *na* is merged with the periphery and letter *sa* is altogether obliterated. The usual *Rajno* is missing

The coin is of Sri Satavahana whose coin has been retrieved at Kanganahalli *Mahachaitya* inscribed as *Rajno Siri Satavahana*. However, the legend in this coin is anticlockwise around three-arched hill. The legend in this coin is clockwise

Rev: Very faint Ujjain symbol. Worn out.

Coin No. – SAN 13

Issuing Authority – Indistinct

Material/Shape/Size/Weight (in mm and gm) – Potin. 19, 2

Depth in mts – 1.00

Find spot and short description –

Obv: Highly worn out

Rev: Very faint Ujjain symbol

Coin No. – SAN 14

Issuing Authority – Indistinct

Material/Shape/Size/Weight (in mm and gm) – Potin, Circular. 22, 2

Depth in mts – 1.00

Find spot and short description –

Obv: Highly worn out. Details lost

Rev: Very faint Ujjain symbol

(Poonacha 2011, 603)

Coin No. – SAN 15

Issuing Authority – Satakarni

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 22, 2

Depth in mts – 1.00

Find spot and short description –

Obv: Worn out triangular standard, *swastika* to the left and to the right of *swastika* along the periphery three letters *ka ni sa* are discernible of which *ni* is prominent and the preceding and succeeding letters could be *ka* and *sa*. The coin could be that of Satakarni

Rev: Obliterated. Details not visible

Coin No. – SAN 16

Issuing Authority – Indistinct

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 15, 2

Depth in mts – 1.00

Find spot and short description – Details on both sides are lost

Coin No. – SAN 17

Issuing Authority – Indistinct

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 12, 1

Depth in mts – 1.00

Find spot and short description – Small Circular coin. Details are lost

Coin No. – SAN 22

Issuing Authority – Indistinct

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 12, 2

Depth in mts – 1.20

Find spot and short description –

Obv: Worn out

Rev: Faint honeycomb design throughout the surface

Coin No. – SAN 23

Issuing Authority – Indistinct

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 18, 6

Depth in mts – 1.20

Find spot and short description –

Obv: Worn out. On one side a deep cut mark is observed

Rev: Plain

Coin No. – SAN 32

Issuing Authority – Indistinct

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 14, 4

Depth in mts – 1.50

Find spot and short description –

Obv: An animal in the act of jumping from left to right with its tail curved at the back. In all probability the animal could be a lion

Rev: Plain

Coin No. – SAN 33

Issuing Authority – Sri Satakarni (?)

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular (mutilated). 16, 2

Depth in mts – 1.57

Find spot and short description –

Obv: Mutilated worn out coin. Only three-fourth extant. Three-arched hill, river and crescent. Very faint legend only letter *Si* and *ri* is seen. At the time of casting

it appears while still the metal was hot it has got smeared. Could be the coin of Sri Satakarni

Rev: A faint Ujjain symbol

Coin No. – SAN 35

Issuing Authority – Maharathi Sri Satavahana

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 31, 28

Depth in mts – 1.95

Find spot and short description –

Obv: Three-arched hill, river and crescent. Interestingly, an additional title for the first time is added as Maharathi. The legend

Maharathino Siri Satavahanasa

Rev: A large heavy coin struck in the centre leaving a fairly large periphery on both the sides. The coin edge on the reverse has been rubbed all along the periphery to use it perhaps as a play object like a hop-scotch. The attempt of prying out the coin from the mould both at obverse and reverse is observed

(Poonacha 2011, 604)

Coin No. – SAN 41

Issuing Authority – Indistinct

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 17, 4

Depth in mts – 1.57

Find spot and short description – Worn out. The details are obliterated

Coin No. – SAN 58

Issuing Authority – Indistinct

Material/Shape/Size/Weight (in mm and gm) – Lead, Oval. 23, 8

Depth in mts – 2.40

Find spot and short description – Worn out. Details are obliterated

Coin No. – SAN 59

Issuing Authority – Indistinct

Material/Shape/Size/Weight (in mm and gm) – Copper, Square. 15x14, 2

Depth in mts – 2.45

Find spot and short description –

Obv: Highly worn out animal. Could be bull moving to left and very faint traces of letter *ta* and *ka*. Further details are lost

Rev: Details are obliterated

Coin No. – SAN 68

Issuing Authority – Indistinct

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 18, 4

Depth in mts – 2.73

Find spot and short description –

Obv: An animal in the act of jumping from left to right with its tail curved at the back. In all probability the animal could be a lion

Rev: Ujjain symbol. No legend. The circular pellet imprinted in it

Coin No. – SAN 93

Issuing Authority – Indistinct

Material/Shape/Size/Weight (in mm and gm) – Lead, Circular. 14, 4

Depth in mts – 4.12

Find spot and short description –

Obv: Weather worn

Rev: Worn out

(Poonacha 2011, 605)

Typological Classification of the Coins

1. Ruler/Issuing Authority – Silver PMC

2. Coin Number - 81

3. No. of Coins – 1

1. Ruler/Issuing Authority – Die-struck coin

2. Coin Number – 12, 20, 28, 33, 35, 62, 73, 74, 78, 79, 80, 123

3. No. of Coins – 12

1. Ruler/Issuing Authority – (1) Siri Satavahana

2. Coin Number - 110

3. No. of Coins – 1

1. Ruler/Issuing Authority – (2) *Maharathi* Siri Satavahana

2. Coin Number – 67, 120

3. No. of Coins – 2

1. Ruler/Issuing Authority – (3) *Rajno* Siri Satavahanasa

2. Coin Number – 38, 64, 86

3. No. of Coins – 3

1. Ruler/Issuing Authority – Sri Satakarni

2. Coin Number – 3, 6, 7 (elephant type), 9, 11, 16, 31, 36, 39, 46, 60, 69, 83, 88, 91, 96, 97, 99, 107, 108, 109 (bull), 113, 114 (bull), 118 (lion), 124 (lion)

3. No. of Coins – 25

1.Ruler/Issuing Authority – *Rajno* Sri Satakamnisa

2. Coin Number – 1, 2, 4, 5, 8, 13, 15, 18, 21, 22, 24, 25, 29, 30, 32, 34, 37, 45, 51, 54, 56, 59, 61, 66, 84, 85, 87, 89, 92, 95, 98, 100, 102, 103, 104, 106, 119

3. No. of Coins – 37

1.Ruler/Issuing Authority – Siva Siri Pulumavi

2. Coin Number – 43, 44, 47, 48, 52, 55, 57, 58

3. No. of Coins – 8

1.Ruler/Issuing Authority – Yajna Sri Satakarni

2. Coin Number – 40, 42, 49, 53

3. No. of Coins – 4

(Poonacha 2011, 605)

1.Ruler/Issuing Authority - Medieval

2. Coin Number – 26, 75, 76

3. No. of Coins – 3

1.Ruler/Issuing Authority – Indistinct

2. Coin Number - 10, 14, 17, 19, 23, 27, 41, 50, 63, 65, 68, 70, 71, 72, 77, 82, 90, 93, 94, 101, 105, 111, 112, 115, 116, 117, 121, 122, 125

3. No. of Coins – 29

(Poonacha 2011, 606)