

## Radhanagar : An Early Historic Buddhist Settlement in South Eastern India

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**Abstract:** The criss-cross network of Buddhist centres of Radhanagar, Langudi, Dhauli, Aragarh, Jaugarh, Salihundam, Dantapura, Kalingapatna, Lingakonda, Kottur, Thatlakonda, Dhulikota, Phangiri, Guntupali, Nagarjunakonda, Vadmanu, Dhyankataka and Amaravati are all contemporary and had cultural interactions in the post-Mauryan period in the ancient Kalinga and Andhra Desha. Radhanagar, An Early Historic Fortified settlement of Odisha was subjected for archaeological excavation for three consecutive sessions from 2010 to 2013 sessions and the report was published. The prolonged investigations were carried out in comparisons with other contemporary sites of South Eastern India which resulted fresh insights into the growth of Buddhism, trade and urbanism. The major contribution of the study is identification of provincial headquarter of Asoka and Eastern Indian coastal trade route with evidence of series of Buddhist settlement sites on the East Coast starting from Tamralipti to Bhattiprolu. An up to date analytical study is thus made in considerations with archaeological findings of Radhanagar Settlement.

**Keywords:** Early Buddhist Settlements, Trade Route and Urbanization, Kalinga and Andhra Desha.

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## INTRODUCTION

Recent archaeological spade in the coastal region of South Eastern India demonstrate the distinctive growth of urbanism in the form of fortified settlements, structural happenings in brick and stone, use of iron technology, arrival of new and advanced pottery technology and the emergence of coinage. A settlement as defined may be a site or any spot on the landscape with datable traces of human activity. They may be occupation sites of various kinds or a conglomerate of occupation sites making up societies or archaeological cultures which could be very well understandable from our present site Radhanagar. The excavations of number of Buddhist sites in South Eastern India, starting from the Brhamani-Mahanadi, Vamsadhara-Nagavali and the Godavari-Krishna river valleys covering the coastal region of South-Eastern India has broaden the facets of spread of Buddhist settlements along with port sites of Palur, Kalingapatna, Vishakhapatna, Arikamedu, Machilipatnam and Bhattiprolu which all brought new dimensions on the growth of trade, religion and urbanization. The spread of Buddhism was onset during the Mauryan period in the South Eastern India, stretching from Odisha to Karnataka including Andhra and

Telangana which has broadened the understanding of various aspects of historical developments in the post-Mauryan period at least up to third century CE. Incidentally, a good number of Buddhist settlementsites in these areas provide continuous interactions which are also reflected in the religion, art and architecture combined with trade and social development. An example may be cited here that the major Buddhist settlements excavated and explored in the regions of Odisha such as Radhanagar, Langudi, Lalitgiri, Udayagiri had close interactions with the South Indian major excavated sites of Salihundam, Thtlakonda, Dhuklikota, Phangiri, Guntupali, Kotalingala and Nagarjunakonda among others. (Fig. 1). Some of the sites are found away from the eastern littoral and on the river basins, undoubtedly nurtured along the caravan routes. One such arterial route passed through Jaggayyapetta, Gajulabanda, Phangiri, Kondapur to Tagara or Ter and even beyond. Another caravan path touched Dhulikota, Pashigam, Boddhan to Vidisha or Ujjain. Even the sites on the coast may well form a route connecting the interior of Kalinga to Nellore region as suggested by H.Sarakar and A.Ray (Sarkar, 1987, Ray, 1983) earlier, become a fact with excavation of Radhanagar in Odisha. The most interesting outcome of this study is group of culture complexes, relating to each other through trade routes. In this context, the prolonged archaeological investigations at the excavated site of Radhanagar (Kankia) in Odisha have unfolded new vistas of early historical research. A polemic study of Radhanagar (Kankia) excavations is discussed here to understand the early historic Buddhist Settlements in South Eastern India.

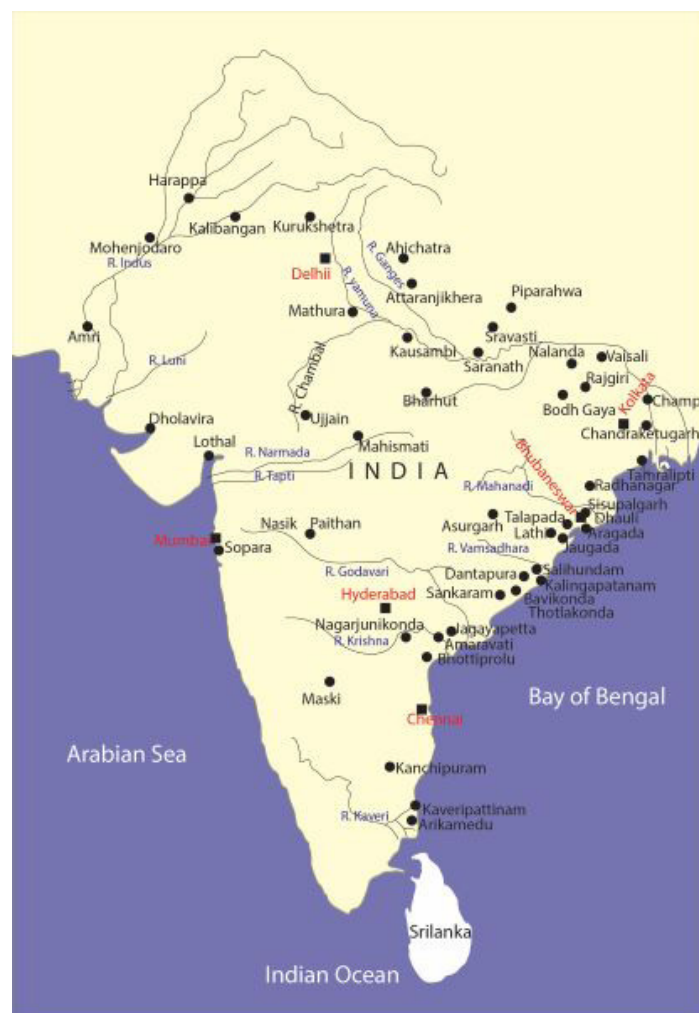


Fig. 1: Early Historical and Buddhist sites of East Coast

In the Indian Sub-continent one of the less studied ancient cities is Radhanagar in eastern India. The site was first reported by K.S.Behera in 1996 and subsequently several scholars (Yule, 2006:18-19, Mishra, 2000:507-50) explored the site. The site was investigated through a trial excavation in 2007-08. Again, with a renewed program of surface survey, mapping, excavations, and geophysical survey from 2010 at the site was continued up to 2013 (Patnaik, 2015). Further investigations of the excavated material remains was undertaken to date the site scientifically (C<sup>14</sup>) and study of physical remains. Traces of human occupation was reported in the area of Radhanagar as such was explored by several scholars. (Patnaik, 2016)

## THE CULTURE COMPLEX

Radhanagar (20<sup>o</sup>. 44' .50.4"N, 86<sup>o</sup>. 10' 39.4"E) is located in the midst of a cluster of villages of high population density on the right bank of river Kelua (Kimiria), a distributary branch of the major river Brahmani and is about 90 kms to the north of Bhubaneswar and 30 kms, from the present shoreline. The site is partially recorded as Kankia but well known as Radhanagar and is connected to the National Highway Number 16 in Dharmasala area of Jajpur district. The region of Dharmasala is dotted with a number of Buddhist sites with several hillocks like Langudi, Kayama, Tarapur, Deuli, Neulapur, Vajragiri etc. which all were excavated during the years 1997 to 2007 by the OIMSEAS (Patnaik, 2014). In this landscape, the site of Radhanagar is located in between the hillocks of Langudi and Kayama at a close distance and enclosed by an earthen fortification. (Fig. 2). The physical landscape of the region covers both deltaic plains and hilly zones. The vast expanse is rich in agriculture and the two important hill ranges are mineral laden and also contain alluvial soil which yields surplus agriculture. It is located in the deltaic plains in the close proximity of the Bay of Bengal. The geological formation of the region is granite, charnokite, sandstone and other sedimentary and metamorphic rock types. Again, the land has rich alluvial deposit and very fertile in nature. Hence, agriculture forms a major part of occupation by the inhabitants of the locality since early historic period as also known from the excavation. Most of the landscape is littered with paddy fields and agricultural lands.

The site of Radhanagar can better be understood with the study two adjoining early historic excavated sites of Langudi and Kayama, as has been outlined by B.D.Chattopadhyaya that a complex of mounds, constituting a single site, can further, figure in what may called a 'settlement locality' constituted by a series of sites in a micro region. Such a cluster of settlements, in which some evidences of homogeneity may be found, constituted a habitat sphere larger than a single urban centre (Chattopadhyaya, 2003:68). The early historic urban centres in general had their foundation in commercial prosperity and wide commercial network, (Ray, 1980) which is reflected in the material culture of Radhanagar. The major three sites having close affinity are located in straight line in a radius of four kilometres and the main settlement site Radhanagar found on the middle in a plain area and the other two Langudi to its south and Kayama to the north forming a culture complex.(Fig. 3.)

The cultural landscape of Radhanagar settlement includes two adjoin early historic Buddhist sites which need to be mentioned to understand its historical opulence. The two adjacent sites of Langudi and Kayama yielded antiquities and structural remains of the early historic period ranging from third century BCE to sixth century CE. Kayama is a hillock overlooking to the river Kelua on its north and Radhanagar site at a distance of 600 meters in the south. The site is a yielded brick stupa and monastic remains but robbed to its lowest level. There are several caves on the edges facing to the Radhanagar settlement. Two important historical document of the site is one standing rock-cut elephant of size three metre and inscriptions of fourth -fifth century CE on a boulder in *sankhalipi* of *kutilla* character read as *Gugularaba, Sri Sri Buddha*. Earlier punch mark coins have been reported from the site. The date of the site is from third century BCE to sixth the century CE. (Fig. 4a. & b).

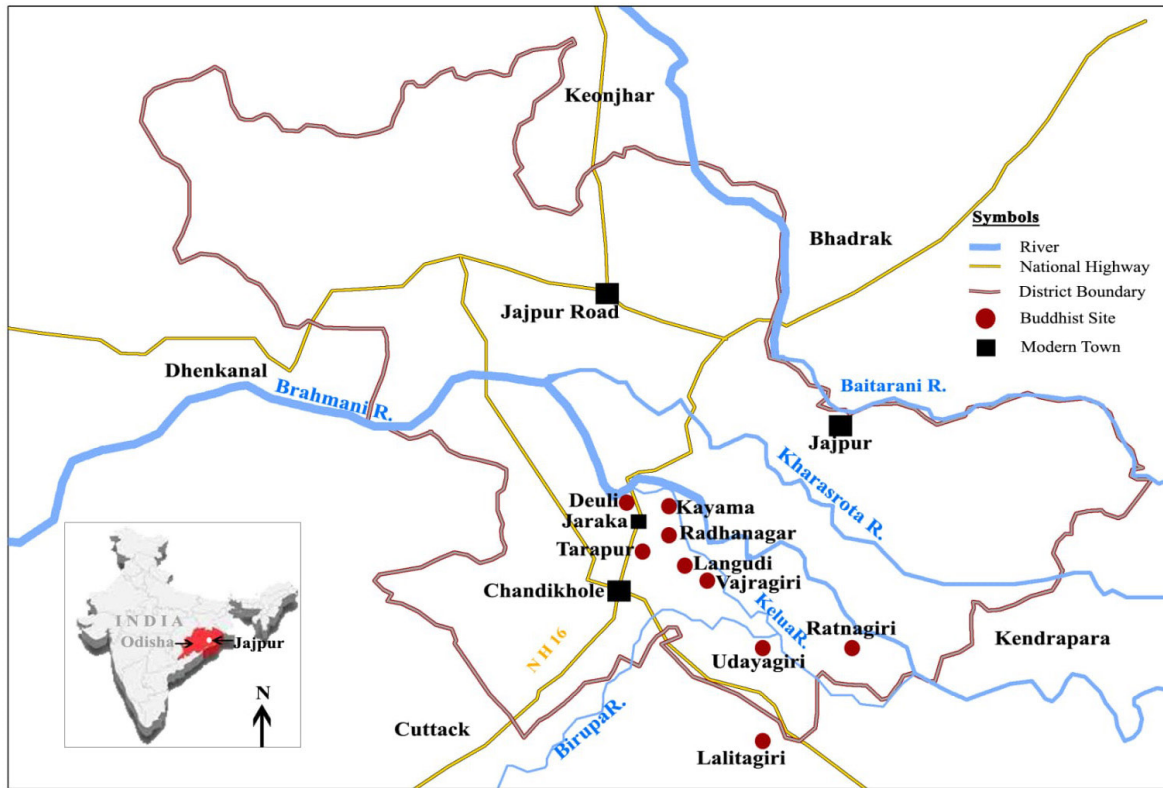


Fig. 2: Radhangara and adjoining areas

**Location of the Buddhist Sites of Dharmasala Area, Jajpur, Odisha**

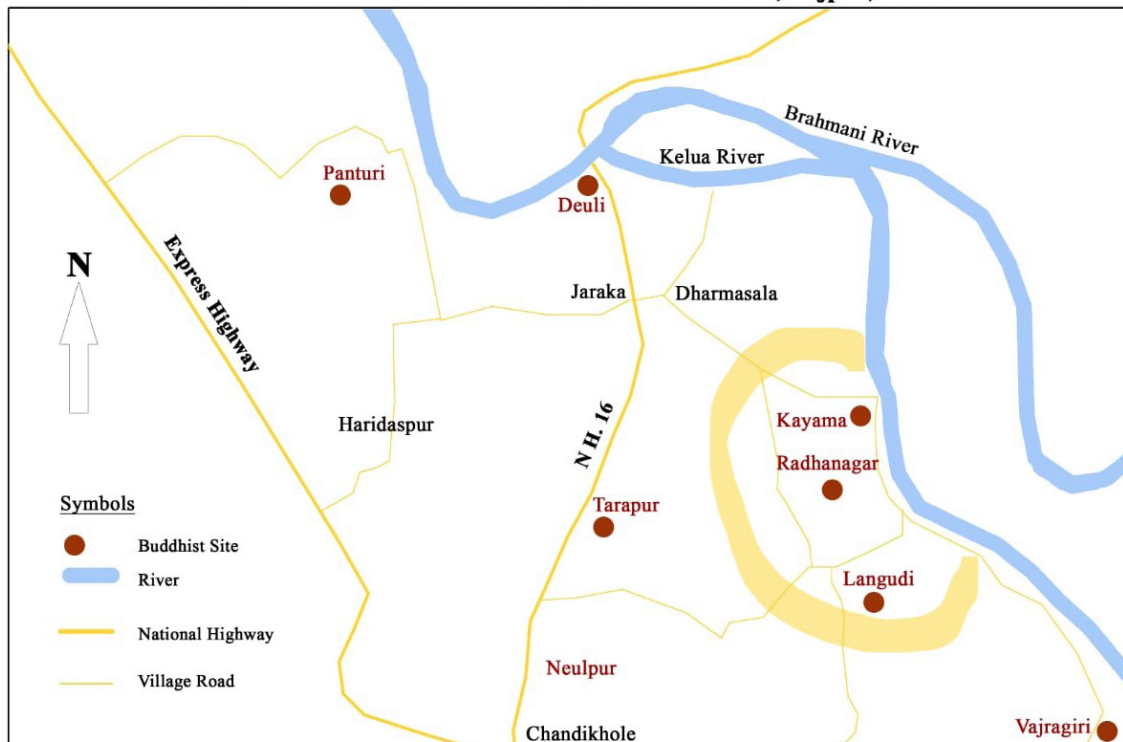


Fig. 3: The Culture Complex



Fig. 4a: Rock-Cut Elephant, Kayama



Fig 4.b. Shell Inscription, Kayama

Another important site to the south of Radhanagar settlement is Langudi at distance of two kms. The important finds from Langudi are the images of Ashoka (or royal figures). During 2000-2001 excavation sessions at Langudi, an inscribed image (bust) has been discovered in the entrance of the early stupa. B.N.Mukharjee of Calcutta University deciphered the inscription reading as “*ChhikarenaranjAshokena* in Prakrit language in Brahmi script which is Sanskritised as “*Sri KarenaranjaAshokena*”, dated to second-first century BCE. (Mukharjee 1997) (Fig. 5.a). Another image having sculptural representation from the same stupa area measures 52 cm. x 50 cm. x 12 cm. is made of Khondalite. The principal male figure is on crown posture or ‘rajalila asana’ in the middle and two female (queens?) attendants are standing on either side with gracious mood. The principal image is no doubt a royal personage adorned with turban (*chhanavira-patta-uttariya*) from neck through

shoulder to chest and back, crown and ear lobes (*kundals*). The female accompanists supposed to be queens adorned with ornaments and stylistically the body adoration and ornaments date the image to second –first century BCE, probably of the Sunga period. (Fig. 5.b). (Pradhan, 2000, 2001). These two images were in the custody of OIMSEAS and now transferred to Odisha State Museum for display. Out of these two images, evidence of the name of Ashoka as that of Sannati and Salihundam seems to be contemporary. It also helps us to find the long and continuous growth of Buddhist sites from Odishan mainland to Andhra Pradesh and Karnataka which otherwise also known from a series of Buddhist monastic sites discovered in the recent times within the region of the Brhamani-Mahanadi-Vamsadhara to the Godavari and Krishna-Cauvery river valleys.



fig. 5a: Royal Figurine from Langudi



Fig. 5b: Image of Ashoka from Langudi

## THE SITE RADHANAGAR

Radhanagar site is fed by a water channel from the river Kelua on its north and by the back waters of the river Birupa in the south, connected through the 'SagadiaNulla' which makes the land very fertile facilitated by continuous water supply from the rivers of Kelua and Birupa. The fertility of the region could have been another factor for the growth of the settlement. Archaeological remains are also noticed in the surrounding villages of Bamphu, Mangalpur, Uttarasaran, Derabar, Gopalpur, Naupala etc.

Radhanagar provides an insight to the whole of the region, since evidence of regular habitation is testified. The habitation deposit of Radhanagar spreads over an area of 9, 02, 500 square meters or 223 acre (9.25 hectare) which is enclosed by an earthen fortification occasionally mixed with bricks, earth, stone and sand. (Fig. 6a & b). The site has a distinctive oval shaped rampart with gateways and projections surrounding an urban core that is around one square kilometre in size; in addition to this, the rampart of the site is embellished with monumental architecture in the form of brick structures and massive laterite blocks. Geophysical surveys and excavations confirm that the site was fully occupied, as seen in the remains of artefacts and architecture not only within the rampart walls but also in the adjacent exterior. Though, the fortification is cut through on the northern side providing a passage, otherwise, intact in northern and eastern sides. The western side defense wall is heavily disturbed due to present day habitation. Three projections could be marked on the northern side fortification. The middle of the eastern side fortification is locally called as 'Singhadwar'. The north-west corner projection is popularly named as 'Hatidiha' and the middle projection of the northern fortification is known at present as 'Uttaradwara'. There is a big opening of 50 meter in width cut through the



Fig. 6a: Location of Radhanagar Fortification

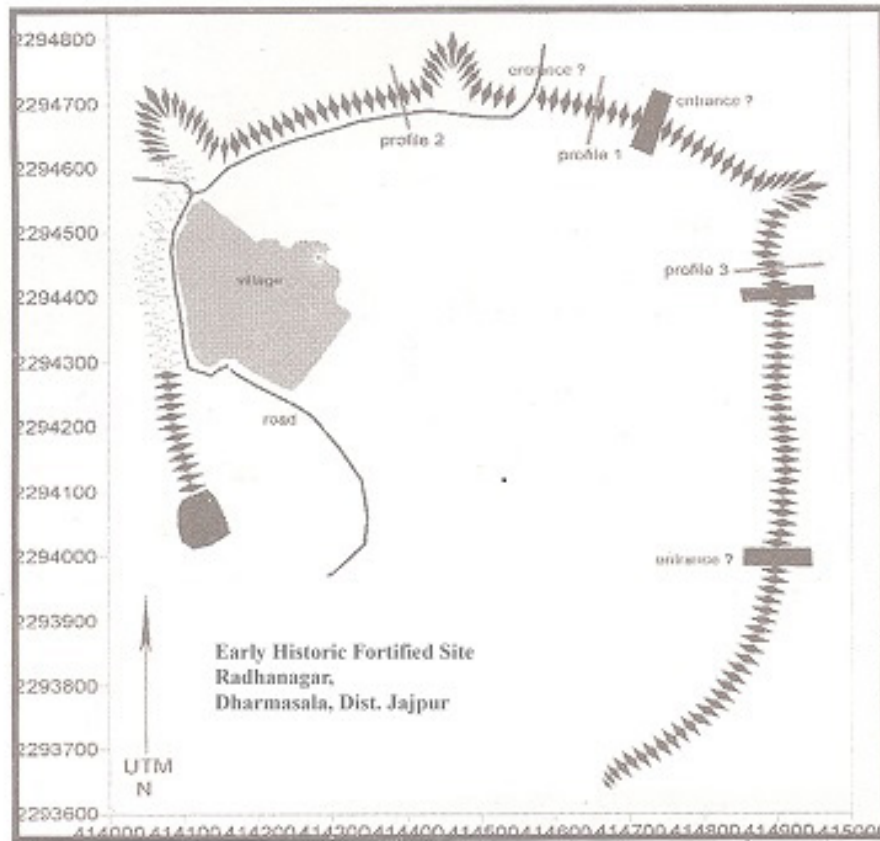


Fig. 6b: Radhanagar Plan

defense wall is seen in the northern side fortification, facing straight towards the Kayama hill rock-cut caves. A water body (pond) is ideally located just opposite to the opening, in the southern end of the site, close to the fortification. Near to the pond some modern habitation is found on the mound. In the south of the pond, there is a modern temple having ancient sculptures mostly of Buddhist pantheons of early medieval period. Though, the original inhabitants of Radhanagar are mainly consists of potters, fisherman and agriculturists but during the recent past some nearby people sifted to this village. But the potter's class people are dominant caste of the village and about 250 families are living at present.

## EXCAVATIONS

The archaeological excavation was carried out according to the suitability for obtaining maximum result and was selected four areas and named as KNK -I to IV. Here, we have deliberately termed the operation under the name Kankia recorded in the revenue record, though; the whole mound is named as Radhanagar and is a very well known locally. The mound was divided into four parts and the excavation continued for three field sessions (2010 to 2013)

The rampart was made up of mud, kankar, earth and occasional use of bricks (46 x 30.5 x 9 cm.), and large and medium dressed laterite blocks. Similar material was also used in the projections. The average height of the ramparts is 4 to 5 metre with a width of 40 meter at the projections. Fortification of each side consists of three projections, two in the corners, and one in the centre. The settlement consists of two gateways, one in the northern side to the east of the central projection with 20 metre width and the northern gateway which is popularity known as Naharaduara facing to the Kayama hill.



The corner projection of the northern side is 8 metre high. The areas to the west of the inner fortification shows traces of major activity which functioned as the nucleus or the citadel of the settlement.

## FORTIFICATION

The Fortification area was cross-checked as KNK-1. i.e., the Rampart area, the available one on the northern bastion and measures 40 x40 meters on the projected side. A cross-section excavation was taken up on the western arm of the bastion. The deep trench on the arm measures six meters. Three phases of the construction of fortification were ascertained with yellowish *kankar* at the bottom, followed by mud and sandy soil with occasional use of laterite on the upper portion. In this area, adjoining to the bastion, a deep cut of about 40 meter wide is made in recent times for thoroughfare and the section is very clear. (Fig. 7). One circular structure, having two courses of laterite stone measures 20 meters in radius was found. (Fig. 8.). The structure could be the remnant of a stupa as is seen at Udayagiri-2 in front of Monastery -2. and also outside the fortification area of Sisupalgarh.

Further excavation was carried out in the extreme –western corner of the fortification where a modern habitation is seen. With excavation of 2.5 meter, a massive structure running north-south with burnt bricks and laterite blocks were traced. Altogether 22 courses with a length of the exposed structure is 35 meter. (Fig. 9) A good number of terracotta tiles and tile keys were retrieved. The structure seems to be a part of the fortification and strategically is located in one of the corners datable to the early phase i.e., Mauryan period. This structure could have been served as an entrance to the site.

In the course of excavation, KNK-2/3 the southern side foundation wall was completely exposed, however the eastern side arm of the structure extended towards north which was partially exposed.



Fig. 7: Section facing south of the Mud Fortification



Fig. 8: Circular structure

To determine the extension and nature of the structure, excavation was carried out in this portion. Though, the left arm of the structure was highly robbed but was completely traced in the plan. The length of the wall measures 39 meter and the breadth is 1.30 meter. The width of the passage in between the two arms is 4.5 meter. Laterite, bricks and big boulders have been used in this portion of this wall. The mortar used in the structure is mud mixed with *kankar*. Perforated finger-tip marked terracotta tile pieces along with number of terracotta tile-keys were also unearthed in this area (Fig. 10). The structure may be a part of the southern entrance to the site. The tiles along with keys are again point to the earliest phase i.e., third century BCE as has been noticed in many of the early historic sites (IAR 1963-64). The rampart may have served a symbolic function, delineating city as island of order in an otherwise chaotic landscape. Like Siupalgarh this fortification is carefully planned with projected bastions which denote Janapada type fort. In Kalinga region the similar type fortification is observed from Dantapuram site (now in Srikakulan District Andhra Pradesh) on the right bank of the river Vamsadhara. One historical phenomenon is clear that these fortified cities did not depend on any centralised administration. They had their spontaneous growth due to interaction of various socio-religious and economic factors having favourable geographical situation.

Another gateway has been exposed on so south-western side of the fortification. Excavation at the gate way on the right side, a long brick wall of 22 metre was exposed with use of laterite and burnt bricks which demarcate the habitation inside. On the left is seen a room of 3 x 3mtrshave been exposed which seems to be associated with the gate way. (Fig. 11). Also Another brick structure on the same site also exposed but the function of the structure could not be ascertained at present.

The next operation was concentrated in KNK- IA which is 200 meters towards the core area of the settlement. (Fig. 12). The interesting findings from this area are a variety of bowls of Maurya, Sunga



Fig. 9: Brick structure of Rampart (N-W Side)



Fig. 10a: Tile Keys



**Fig. 10b: Tiles, Radhanagar**



**Fig. 11: Gate Way (Brick Structure S-W side)**



Fig. 12: Excavation in the core area

and Kushan period. In one of the trench more than 40 bowls are found intact arranged one above another. The shape of the bowls are varied and of fine straight, inward and outward curve and knife edged bowls. The types of the bowls represent the three phases of cultural sequence of the site.

Four trenches have been laid out in the extreme end of south-west corner of the site where a small brick structure was exposed with having two courses of bricks. This could be one of the subsidiary habitation areas adjoining to the massive Mauryan period brick structure. The concentration of potsherds and antiquities clearly indicate that this portion might be occupied by the craftsman community of the site. The most important finding of this area is one inscribed stone pendant. Earlier, it was presumed that this portion may be the opening area for easy outlet of water to outside as a water body is found existing. There is a wide opening in the Northern side of the fortification. This opening noticed parallel in the western side disturbed fortification. It indicates that the extreme end of the site, the south-west corner was not the natural opening, instead the opening area which divides the site into two parts might have been used as a road not only for the inhabitants of Radhanagar but also for the outsiders.

## CULTURAL SEQUENCE

After careful observation of the stratigraphy and study of the material remains as well as inscriptional finds including pottery, the following periodization is made to understand the phases of development of the site:

### Period I

Period I is assigned to c. fourth century BCE to first century BCE. During this phase the settlement entered into a stage of urbanization which is noticed in the brick structure area in the Kankia III location. The brick size of this period includes 39 X 24 X 8 cm. and 34 X 24 X 8 cm. In the early phase

of this period morrum rammed floor levels were noticed adjoining the massive brick structure area. This cultural phase of Radhanagar marks the advent of well-known ceramics of the early historic period of India, namely, NBP ware, Black and Red ware, Black Slipped ware including Red, Grey and Red Slipped wares. Terracotta objects include beads, skin rubbers, figurines, ornaments, hopscotch etc., has been unearthed in this phase. During this phase, bone points, semi-precious stone beads, highly eroded silver punch-marked coins, one antler piece along with a seal written in Brahmi “*SadbhuTissa*” of second century BCE and one pendent with a conch symbol having Brahmi letters “*V(b)ijaya*” are also unearthed which are the evidences of to date the site. Few terracotta tablets and inscribed potsherds which paleographically dated to first century BCE are also unearthed in this phase.

## Period II

This period is assigned to first century BCE and ends up in third century CE was the most prosperous phase of the site. Though the excavation was undertaken mainly in the structural area but maximum number of antiquities in comparison to period I and III are found in this phase. The most important feature of this phase was the considerable progress in clay modeling, which was noticed in the discovery of clay mould and terracotta figurines from KNK III area. The prominent potteries of this phase are a few pieces Rouletted ware along with Knobbed ware, appliqué-incised-basket impressed Red wares, Black slipped, Red Slipped, Red and Grey wares etc. Maximum numbers of fine terracotta ornaments Triratna symbols are also found in this phase. Large number of terracotta beads with flat base also unearthed from this phase. The interesting finds from this level is a terracotta Buddha head of dimension 8.4 X 4.6 cm having turban of alien hair style along with a squatted Lion. The people had now given up the potteries of the preceding period, i.e., Black and Red ware, instead they were using Red and Grey wares. A good number of Kushana copper coins have been found in this phase.

## Period III

Period III dated from third to fifth century CE which is devoid of antiquities in comparison to the earlier phases. In this phase coarse grey potteries were used by the people of the site. The phase marked with less construction activity and shows a gradual deterioration in material culture too. In the structural activities, this phase finds a degenerating form and no such significant structural remains encountered in the excavated area.

## CERAMIC ASSEMBLAGE AND ANTIQUITIES

The pottery types un-earthed from the excavated area comprise a wide array of forms, types, wares and shapes. The study of Pottery is an important source for the reconstruction of ancient lifestyle (Dhavalikar, 1999:121). On the basis of these, the pottery assemblage is summarized. A few Northern Black Polished (NBP) ware shreds of bowl and dishes were unearthed in the KNK III area. These pot shreds are of fine fabric with both silver and golden glazed. NBP was found below 1.8 meters in the KNK III area and in this level a good number of highly eroded silver coins have also been found. This diagnostic pottery characterizes the earliest phase of the Buddhist centres of Rajagraha, Sravasti, Vaisali, Ujjaini, Vidisa (Sanchi) Pataliputra etc. The evidences from the Andhra region Amaravati-Vaddamanu have revealed that NBP reached here during the early Mauryan period itself along with Buddhist missionaries from the Magadha area (Sarma:1991) which is also true in Odishan context with the evidences from Radhanagar (Kankia). (Fig. 13.a)

Few Rouletted ware shreds are found in the KNK III structural area from phase II. Some shreds are treated with fine glazed slip whereas few shreds are devoid of slip with gray signing. It is made of



Fig. 13a: NBP



Fig. 13b: Rouletted ware



Fig. 13.c: Knobbed ware photo

extremely fine, well levigated clay and fine grey or grayish pink in colour, and treated with a thin slip. Earlier this type of pottery was reported from Manikapatna excavations (Pradhan 2000). Scientific Analysis of Rouletted Ware from Sembiran (Bali), Arikamedu (India) and Tissamaharama (Ceylon) are very similar. Rouletted ware has been reported from various sites of East Coast like Chandraketurgarh, Tamralipti (Ghogte 1996:69-85), Sisupalgarh and also from South India. Heidrun Schenk's extensive studies on Rouletted Ware provided a comprehensive picture of the origin and distribution (Schenk 2014: 95-115). The date for this ware was now considered from 3<sup>rd</sup> century BCE to 1<sup>st</sup> century BCE. It clearly indicates that Radhanagar was certainly in trade links with the outside settlements of the same period both north and south. (Fig. 13.b).

A good number of knobbed ware shreds were unearthed from phase II of the site. Almost all trenches yielded this pottery. The finding of Knobbed ware is very significant as it encompasses the spread and growth of early Buddhism in a symbolic form. (Tripathi *et. al*, 2019 :82-89) The central knob has been interpreted as mount Meru and the circles as the Ocean. This ware is also made of well levigated clay and especially found on the base portion in the interior surface of the bowls. The rim of this pottery is featureless and is carrinated at shoulder portion. This ware is also found at the sites with Buddhist affiliation in Odisha as also other parts of India and South East Asia. This ware is represented at Ban-don-Ta-phet in Thailand and Traque in Vietnam (Ray 1996). All early historic urban sites so far excavated in the region of Odisha and South –Eastern India yielded knobbed ware. The finding of this pottery indicates some short of trade and religious contact with South East Asia and also other Buddhist complexes of India. (Fig. 13.c)

Shreds of Black and Red ware comprising bowls, saucers, platters, dish-on-stand, small cups etc. were retrieved from the earliest level of Phase I. This ware has been made out of well levigated clay and moved on a first wheel and is fine in fabric. Some of the sherds bear graffiti marks on the



exterior surface. This typical ceramic type was reported from KNK III brick structure area at a depth of 3.2 meters from the lowest level and this cultural level dates back to fourth-third century BCE. The associated antiquities are crucibles, iron nails and objects, terracotta objects like beads, spindle whorls, hopscotch etc.

Among all the early historic sites of Odisha like Sisupalagarh, Manmunda-Asuragarh, etc. yielded Black slipped ware in proportioned amount as also from the site of Radhanagar. The main shapes in this ceramic type are convex sided bowls, cups, plates, saucers and small utensils. This pottery as indicated by its fabric and lustere that they have been moved on a fast wheel and rubbed and glazed afterwards. They also bear graffiti marks like zigzag patterns, oblique strokes, straight lines, triangles etc.

Dull Red ware as represented at Radhanagar, is mainly characterized with storage jars with flaring rims, inverted rims, straight cut rims etc. The course of the pottery is marked with impure clay without any levigation. Sometimes this pottery is treated with a red slip on its exterior or surface. Besides, some graffiti marks, both on the exterior and interior surfaces have been encountered. Most possibly this ware was used for cooking and storing purpose owing to their shape and size.

Grey ware both fine and course fabric has been encountered. Some of the pottery bears a grey core only which may be due to ill firing. The main shapes in this pottery are storage jars, globular pots with faring rims and sometimes straight cut rims. Graffiti marks characterized by straight oblique bands arranged in criss-cross pattern and overlapping each other have also been found in some of the shreds.

Red Slipped ware mainly represents household pottery and table ware as also cooking vessels. The main shapes are dish, dish-on –stand, cups, plates, carinated bowls, plates etc. This pottery is made of well levigated clay and turned on a fast wheel and is fired in a high temperature. This pottery also bears graffiti marks on the interior as also exterior surfaces.

## ANTIQUITIES

The excavations at Radhanagar yielded a large number of antiquities of different materials from iron, gold to terracotta figurines, crucibles, inscriptions, coins, etc. These antiquities represent a wide spectrum of materials used for household, decorative, ritualistic as also ornamentation purpose. Antiquity concentration was seen large in the KNK III area.

## INSCRIPTIONS

A pendent of size 1.9 X 0.9 cm. inscribed in early Brahmi script SaddabhuTissa with a swastika symbol which dated to c. third –second century BCE. This inscription is an indicator of the site and makes us understand to a person of high esteem. Because the epithet *Sadabhuis* omnipresent perhaps denotes a resident monk of Radhanagar. Mention may be made that in Buddhist literature that Tissa, the brother of Asoka (?) did choose Kalinga to be the place of his retirement and the emperor had built a monastery named as BhojakagiriVihara for him, which became a great centre of Buddhist activities. Dharmarakshita, preceptor of Tissa, who was a great propagator of Buddhism in western India spent last days with Tissa and other monks in the BhojakagiriVihara (Malasekera 1960:585). This is an important evidence that shed new light on this urban settlement as it was perhaps used as seal of this Buddhist settlement though the identification of *SadabhuTissa* is yet to be made. (Fig. 14)

Another circular stone pendent of 0.5 cm. in radius having conch symbol with Brahmi script *B(V) ijaya* found from stratified context of second -first century BCE. The name *B(V) ijaya* has also relevance in Odishan context and its relation with Sri Lankan Buddhism. Mention may be made of Vijaya and his entourages are the first humans to settle on the island and their ancestry is from eastern India (Thapar



Fig. 14: Tissa .Inscribed Pendant

2013:143). One oval shape sealing of 0.2 cm., inscribed with Brahmi letters *DevayaNagarawas* also found from stratified context of second century CE. This certainly points to Buddha since the Buddha is addressed in some seals and sealings as Deva and the sites spelt as *Nagaram* make us to understand the urban character. (Fig. 15.a &b)



Fig. 15a: Inscribed Sealing  
(Vijaya)



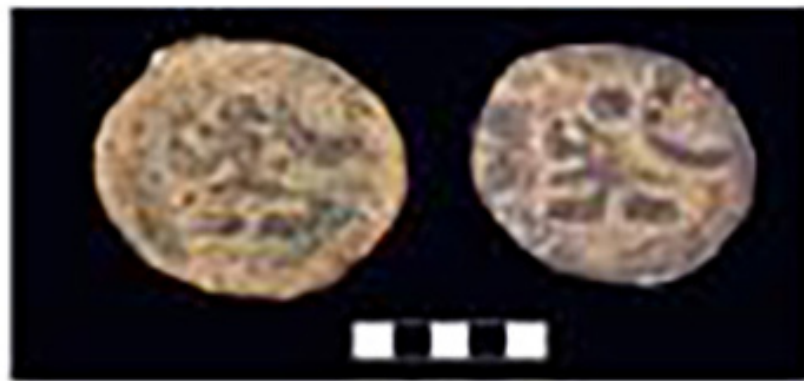
Fig. 15b: Devaya Nagara Inscribed Tablet

## COINS

Coins are to a great extent helpful in determining the chronology of an excavated site. Good numbers of both silver and copper coins have come from the excavation. (Fig.16a) The coins include highly eroded silver coins, un-inscribed copper cast coin and Kushana copper coins. Nearly, 50 coins of different periods are retrieved from the excavation. Of these, nine rectangular/oblong silver punch-marked coins having sun, moon and wheel designs, nineteen highly abraded rectangular silver coins, un-inscribed copper cast coins with standing human figures, Kushana copper coins, Puri-Kushan coins have been found. Besides thirteen Kushan coins have been recovered from adjoining Kayama area of this complex earlier as reported. (Tripathy 1986:45). Recently in August 2020, a Kushan Gold Coin has been retrieved from Radhanagar site as a chance discovery by a local farmer. It is known from preliminary examination that the coin belong to Kushana period and King Huviska issued. (Fig. 16b.) The coin is of Nana series and the obverse is inscribed in Greek script and in ancient Bactrian language and read as ‘*..shaonanoshao....oeshkikoshano..*’ meaning, the legend is NANA, the name of them goddess venerated by the Kushanas. (Patnaik 2021: 198) The coin is a spectacular evidence to establish contact of the site with distant land like Kushans. It is positive evidence to ascertain the trade activity of the settlement.

## TERRACOTTA FIGURINES

Terracotta ornaments are distinctly prevalent at Radhanagar compared with other sites in the region, and are found in the form of bangles, earrings, finger rings, and pendants. These items have been found in all of the excavated areas. With the exception of the simplest forms of ear studs, beads, and bangles, all of the terracotta ornaments from Radhanagar are made from moulds in which decorative patterns were embossed through the moulding process. More than 500 different complete shape and



**Fig. 16a: Punch Mark Coins**



**Fig. 16b: Kushan Gold Coin**

fragmentary artefacts were collected from the excavations. More such artefacts are collected by some local people and kept in their personal collection. One such person of Kayama village named N.Sahu has kept good number of terracotta objects in his personal collection as chance findings from the area which I have got a chance to see.

Terracotta pendants of a greater variety of styles and decorations which are of Buddhist in nature have been found. Some of them are having impressions of Bodhi tree, *triratna*, lotus, etc.(Fig.17a)The moulded items often exhibit decorative motifs ranging from embossed concentric circles to floral and geometric designs. Of the terracotta ornaments from Radhanagr, pendants exhibit the greatest diversity of size, shape, and decoration. Terracotta pendants were made utilizing only the moulded technique that produced an embossed design since there were no plain pendants. A total 4 number of terracotta Roman bullae have been found which are circular with human head in profile.(Fig.17.b)These bullae's are widely distributed from various sites including Sisupalgarh of the period first-second century CE. The terracotta snake figurines are retrieved in good number which makes us to understand that the site preserves the ancient tradition of snake worship in Buddhism. In fact large number Mucchalinda Buddha images are found from nearby Lalitgiri Buddhist site.

Terracotta figurines, both human and animal are unearthed mainly from the core area (KNK III). The most important among these are one squatting Lion, head portion of a Buddha image, human heads, a terracotta round plaque having three elephant heads, bull and three snake figurines have been recovered. (Fig.17.c) The Lion figurine which is found in the Sunga-Kushana level is very much similar with the Sunga terracotta figurines (Mathur 1996). (Fig. 17.d.) The turban of the head portion of the Buddha image suggests that this figurine might be influenced by art, alien to Odisha (Gandhara School of art?). (Fig. 17.e.). A terracotta mould of a Buddha figure was also retrieved from this site. The variety of terracotta figurines found from Radhanagar could definitely shed new light on evolution of Indian terracotta art during Maurya and Sunga-Kushan period. The far and wide cultural interaction and prosperity of the site is known from these art objects.



Fig. 17a: Triratna

## BEADS

The excavations at Radhanagar yielded both stone and terracotta beads numbering 59 in total. Few semiprecious stone beads like carnelian, banded agate, jasper, crystal and quartz beads are retrieved. From the surface lustre it appears that the beads were made of well levigated superfine clay of light brownish colour. The perforations of the beads are executed from both the sides and are very thin in nature. Most probably the beads were used as necklaces arranged with strings. The shapes of the beads include small oval, flat based, one side flat based and globular. (Fig. 18) From the evidence of stone beads suggest distant trade contact with the nearby population and areas. From the varied shapes and sizes, it also appears that the beads were worn by people of different age groups.

## BANGLES

The excavations conducted at the early Historic site of Radhanagar yielded a number of glass bangles. All of them are broken and fragmentary condition. From the texture and cleanliness it appears that the bangles were manufactured in traditional technology as they do not show purity in the texture. The colour of the bangles appears to be of light brownish to fine grey-white in colour. The bangles are translucent and are smelted in earthen crucibles and hence the surfaces of the bangles are little rough. The bangle specimens comprise of both big and small and might have been used by different age groups. A total of seven bangle fragments have been recovered from the excavation.

## BIOLOGICAL REMAINS

The faunal remains of the site includes fragment of *Bos Indicus Linn*, (Bull or Ox), *Undent* (Goat/Deer), *Bubalus budalis* (Buffalo), *Babalus arnee* (Deer like) *Equus sp* (Equidae Horse), *Capra hircus Linn* (Domesticated Goat), *Ovis sp* (Ram), *Lissemys punctate/ Lincepede* (Tortoise or Turtle), *Axis axis Erxleben* (Chital), *Canis familiaris Linn* (The Dog), *Equus* (Horse), *Rottus sp* (Rodent or Rate like), *Chitra /Trionyx* (soft shell tortoise), *Undent Fish*. Out of these animal remains *Bos indicus Linn* (Bull or Ox) and *Undent* (Goat/Deer) are the dominant species. The biological remains were examined by Supriya Nandi of ZSI, Kolkata. However, the evidences of charred horse remains and other domesticated animals make us to understand the rich bio-diversity of the region during 4<sup>th</sup>-3<sup>rd</sup> century BCE. An antler piece sample from the lowest level was submitted to BETA laboratory which dates around 1350 BCE. This again testifies the wild habitation of the area.

## OTHER OBJECTS

Other Antiquities includes hops-catches, throwing disk, finger ring and toe ring, terracotta wheels, some iron and bronze objects. The most important ones are the gamesman, ear ornaments, rings, hopscotches, crucibles, gamesman etc. Crucibles of different sizes are also unearthed from excavations which indicate that the people of Radhanagar (Kankia) were well versed in the metal smelting technology. Just like other early historical sites, Radhanagar also yielded maximum numbers of round shaped hopscotches. A few terracotta animal and human figurines also unearthed from the excavation. The antiquities including coins and inscription reveal the prosperity of the site from fourth-third century BCE to third –fourth century CE. However the most flourishing period is third century BCE to third century BCE.

## DATE OF THE SITE

The charcoal sample from the stratified layer five from the depth of 3.65 meter is submitted to BETA laboratory for AMS dating and the result delivered is the site dated to 412-354 BCE which is pre-

mauryan era. (627793-1)CRL, AMS-Standard delivery (charred material): acid/alkali/acid 2310 +/- 30 BP(78.1%) 412 - 354 cal. BC (2361 - 2303 cal BP). Thus the site was earlier dated on the basis of stratigraphy also to fourth century BCE now it is confirmed that early urbanism begins around fourth century BCE at Radhanagr and continued to grow up to third –fourth century CE as discussed.

## CONCLUSION

Radhanagr (Kankia) like Ujjaini and Bhita is a city-centre with good defenses and moats. Megasthenes has given a good description of the capital city and its defensive measure (McCrandle, 1877 & 1927). Monumental architecture began in north and central India from the sixth –fifth century BCE, but in western India and the Deccan it appeared in 3<sup>rd</sup> -2<sup>nd</sup> century BCE. Pliny records there were thirty fortified towns in the Satavahana kingdom, and some of them like Sannathi and Satanikota have now been excavated (Dhavalikar, 1999:82.). Now in Eastern India a number of fortified settlements have been excavated and mention may be made of Sisupalgarh, Radhanagar, Jaugarh, Budhigarh, Manmunda-Asurgarh, Kharligarh (Odisha), Chndraketugarh, Tamluk (Tamlukti, West Bengal). Dantapura, (Andhra Pradesh) but all are closely in one region. Seneviratne has studied long back and shed light on secondary state formation (Seneviratne, 1983), Sahu also in his recent work opined that early historic Odisha lacks direct evidences on the trade contact (Sahu, 2020). In this context, the Radhanagar settlement has provided immense evidences on the formation of fortified settlement at least from pre-Mauryan to pre-Gupta periods and thriving trade and commerce along the costal route connecting Buddhist sites as monks and merchants were the main architects of these series of Buddhist monastic and stupa sites.

This site is an example by itself excavated during 2010 and 2013 has laid bare archaeological facts that help us to reconstruct the expansion of Buddhism, Trade and Urbanisation in the region of South Eastern India which is reflected in the culture complexes of early historical period of at least three major river valleys i.e., the river valleys of Brahmani-Mahanadi, the Vamsadhara and the Krishna-Gaodavari. In this context, urban centres developed in Andhra, Telengana and Odisha, are marked from the settlement sites such as Kotalingala, Dhulikota, Peddabankur and Kondapur (Andhra Pradesh) and Sisupalgarh, Radhanagar, Narla-Asurgarh (Odisha) with a detailed look at the fortification, structures and antiquities excavated. The precise discussion on the excavations at Radhanagar (Kankia) led us to think that Radhanagar had close link with south Indian sites through Buddhism and Trade both inland and Oceanic. In other way round the growth of Urbanism in South Eastern India was a greater phenomenon covering the internal Land as well as Maritime Trade Routes.

All the material evidences as discussed with well laid out fortification akin with Dantapura and suggest it was definitely an important royal settlement of 4th-3rd century BCE and continued to prosper up to third –fourth century CE sample No. But no doubt it was a city (Buddhist) of Mauryan period. However, this city, judging all the material culture and inscriptional evidences which clearly indicates the site as the city of Mauryan period i.e., Toshali Nagar, the provincial headquarters of Ashoka. (Chakrabarti, 2011, Lahiri, 2016: 220-21). Sisupalgarh was identified earlier as Toshali of Mauryas. (Sahu 1962). But Sisupalgarh settlement though had its beginning around seventh century BCE but urban character is found only around second –first century BCE and not a single Buddhist antiquity was retrieved from the excavation. Dhauli near Sisupalgarh was on the trade route might be a pilgrim centre like that of Langudi. Hence, Sisupalgarh is more appropriate as Kalinganagari- the capital city of emperor Kharavela and Radhanagar, more suitably is to be identified as Toshali Nagar which is also supported by an inscription on a potshred. (Fig. 20) Hence, the contribution of Radhanagar excavation to the urban history of India is more significant so far South Eastern India is

concerned. The excavations at Radhanagar has changed the perspective of early historical archaeology of Odisha, so far research has done in the areas of Buddhism, Trade and Urbanisation.

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