

Archaeology of Radhanagar: A Mauryan City of Kalinga

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Abstract: Radhanagar, An Early Historic Fortified settlement of Odisha was subjected for archaeological excavation for three consecutive sessions from 2010 to 2013 sessions. Prolonged investigations carried out in context of 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 Ashoka and Eastern Indian coastal trade route with evidence of series of Buddhist settlement sites on the east coast starting from Tamralipti to Bhattiprolu. The criss-cross net-work of Buddhist centres and port sites of Radhanagar, Langudi, Dhauli, Aragarh, Jaugarh, Salihundam, Dantapura, Kalingapatna, Thatlakonda, Linglakonda, Kottur Dhulikota, Phangiri, Guntupali, Amaravati up to Sannathi and Kanaganhali are all contemporary and had cultural interactions in the Mauryan and Post- Mauryan period in the ancient Kalinga- Andhra Desha and Karnataka which is evident from the discovery of coins of Sri Sada, the Maharaja of Kalinga-Mahisasaka country from Dharanikota and Vaddamanu and significant discovery of Kalinga Edict of Ashoka from Sannathi. An up-to-date analytical study is thus made in considerations with archaeological findings of Radhanagar Settlement.

Keywords: Buddhist Settlement, Archaeology, City, Trade Route, Ashoka, Kalinga and Andhra Desha.

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Introduction

Recent archaeological spade in the coastal region of South Eastern India demonstrates 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 process of urban growth or the 'second urbanization' covered the Ganga valley, Indo-Gangetic Divide, Northwest India, Bihar, Central India, Odisha, Andhra Pradesh and Tamila Nadu in its early phase and almost all over the Indian Subcontinent as new evidences are coming from Keeladi excavation datable to 6th century BCE. (Sivanatham: 2019). 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 costal region of South-Eastern India has broaden the facets of spread of Buddhist settlements along with Port sites of Palur, Kalingapattna, Vishakhapattna, Arikamedu, Machilipatnam and Bhattiprolu which all brought new dimensions on the growth of trade, religion and urbanization. The spread of Buddhism started during Mauryan period in the South Eastern India, stretching from Odisha to Karnataka including Andhra and Telengana has broaden the understanding of various aspects of historical development in the Mauryan and Post Mauryan period at least up to 3rd century CE. Incidentally, a good number of Buddhist settlements in these areas provide continuous interactions among the settlements 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, Thotlakonda, Dhuklikota, Phangiri, Kotalingala and Sannati- Kanaganhali among others (Fig.1). Some of the sites are found away from the eastern littoral and river basins; undoubtedly, they grew 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

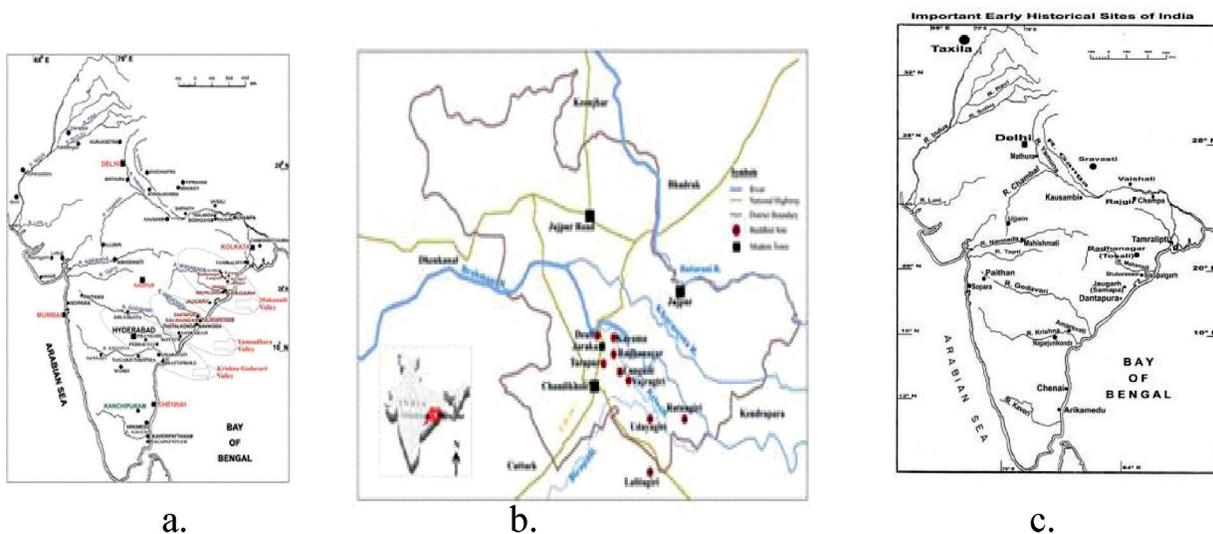


Fig. 1- a,b,c. South East India Buddhist Settlements & Radhanagar Site

excavation of Radhanagar in Odisha. The most interesting outcome of this study is group of culture complexes, connected 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 and proved to be a Mauryan city centre. A polemic study of Radhanagar (Kankia) excavations is discussed here to understand the early historic Mauryan city in South Eastern India.

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^{14}) and study of physical remains. (Patnaik,2016).

The Site

Radhanagar (20°. 44'.50.4"N, 86°. 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 which 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 and the region is dominated 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 surrounding hillocks of Langudi and Kayama and enclosed by an earthen fortification. (Fig.1b). The physical landscape of the region covers both deltaic plains and hilly zones. The district 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. The expanse is rich in 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. Radhanagar site is fed by a water channel from the river Kelua, a branch of the river Brhamani on its north and by the back waters of the river Birupa in the south, connected through the 'Sagadia Nulla' 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 increase of the population in past. Archaeological remains are also noticed in the surrounding villages of Bamphu, Mangalpur, Uttarasasan, Derabar, Gopalpur, Naupala, Beruda (YudhaBeruda), Singapur, Kayama, Langudi, Deuli, Vajragiri etc.

Radhanagar provides an insight to the whole of the region, since the 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.2). 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 rampart the site is embellished with monumental architecture in the form of brick structures and



Fig.2: Radhanagar site and fortification (after Yule)

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 defence 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’. Though, the original inhabitants of Radhanagar are mainly consists of potters, fisherman and agriculturist 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. 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 Radhangar found on the middle in a plain area and the other two Langudi to its south and Kayama to the north.

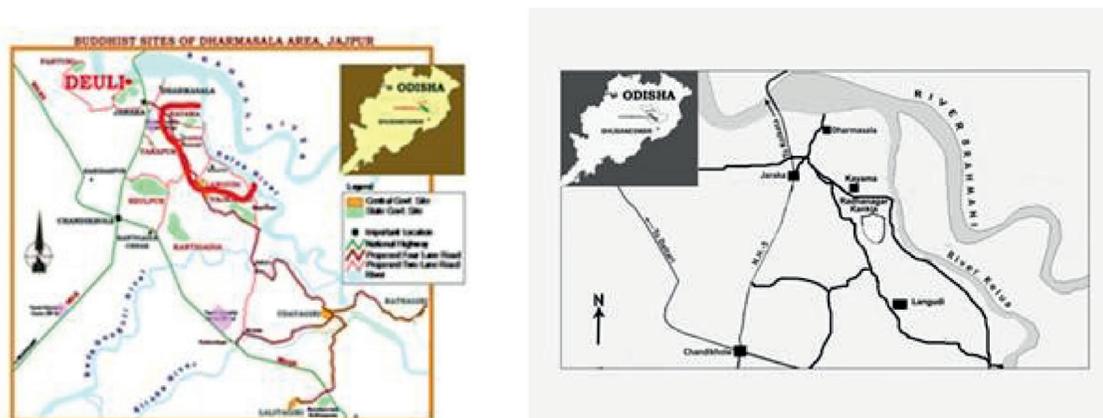


Fig. 3: Kayma-Radhanagar-Langudi culture complex

The cultural landscape of Radhanagar settlement includes two adjacent 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 3rd century BCE to 6th 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 of Kayama has yielded a 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 documents of the site are one standing elephant of size 3 metres and inscriptions of 4th-5th century on a boulder in *sankhalipi* of *kutila* character read as *Gugularaba, Sri Sri Buddha*. Earlier punch mark coins have been reported from the site. The date of the site is from 3rd century BCE to 6th century CE.

Another important site to the south of Radhanagar settlement is Langudi. The important finds from Langudi are the images of Ashoka (or royal figures). During 2000-2001 session of the excavation 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 “*Chhikarena ranja Ashokena*” in Prakrit language in Brahmi script which is Sanskritised as “*Sri Karenaranja Ashokena*”, dated to second century BCE. (Mukharjee, 1997). 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 2nd-1st century BCE, probably of the Sunga period. (Pradhan, 2000, 2001). Out of these two images, evidence of the name of Ashoka as that of Kanganahali and Salihundam seems to be contemporary. It also helps us to find the long and continuous growth of Buddhist sites from Odisha 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 Brahmani-Mahanadi-Vamsadhara to the Godavari and Krishna-Kaveri river valleys.



Fig. 4: a, Elephant Figure, Kayama, b & c. Image of Ashoka ? (Royal Figure)

Excavation

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. 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 metres 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.



Fig. 5: Excavations at the core area with structures of 3rd-2nd century BCE

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. One circular structure, having two courses of laterite stone measures 20 meters in radius was found.(Fig.5.c.). The structure could be the remnant of a stupa as is seen at Udayagiri-2 in front of Monastery -2. and also outside of 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. A good number of terracotta tiles and tile keys were retrieved. The structure seems to be a part of the fortification and strategically located in one of the corners and belong 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. 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 huge terracotta tile-keys were also unearthed in this area. 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., 3rd 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 an island of order in an otherwise chaotic landscape. Like Siupalgarh this fortification is carefully planned with projected bastions which otherwise denote Janapada type fort. Kalinga region have similar type fortification as 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.

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 know 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 etc. The other pottery assemblage of this period includes 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 1st 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 modelling, 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 which are considered as Buddhist in nature were retrieved from this phase. Large number of terracotta beads with flat base also unearthed. 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. The Mauryan art trend still found continued till 2nd - 3rd century CE.

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), 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. 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 extremely fine, well levigated clay and fine grey or greyish 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 Chandraketugarh, Tamralipti (Ghogte1996:69-85), Sisupalgarh, Palur 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 3rd century BCE to 1st 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. 6: a. NBP, b. Rouletted, c. Knobbed Ware

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 carinated 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-Taphet in Thailand and Trique 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 sort of trade and religious contact with South East Asia and also other Buddhist complexes of India. Besides, all other Black and Red ware, Black Slipped ware, Grey ware and Red Slipped wares pottery have been found from the site.

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.(Fig.7a) This inscription is an indicator of the site and makes us understand to a person of high esteem. Because the epithet Sadabhu is 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 Bhojakagiri Vihara 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 Bhojakagiri Vihara (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. Another circular stone pendent of 0.5 cm. in radius having conch symbol with Brahmi script B(V) ijaya found from stratified context of c. second -first century BCE. (Fig.7.b) 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, 2013:143). One oval shape sealing of 0.2 cm., inscribed with Brahmi letters *Devaya Nagara* also found from stratified context of second century CE. (Fig.7.c) This certainly points to the 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.

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. The coins include highly eroded silver coins, un-inscribed copper cast coin and Kushana copper coins. Nearly,



Fig. 7: Inscriptions a. Sadbhu Tissa, b. Vijaya c. Devaya Nagara

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, uninscribed copper cast coins with standing human figures, Kushan 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). A Kushana Gold Coin has been retrieved from Radhanagar site as a chance discovery by a local farmer in 2020. On preliminary examination, it is known that the coin belongs to Kushana period and King Huviska issued. 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.

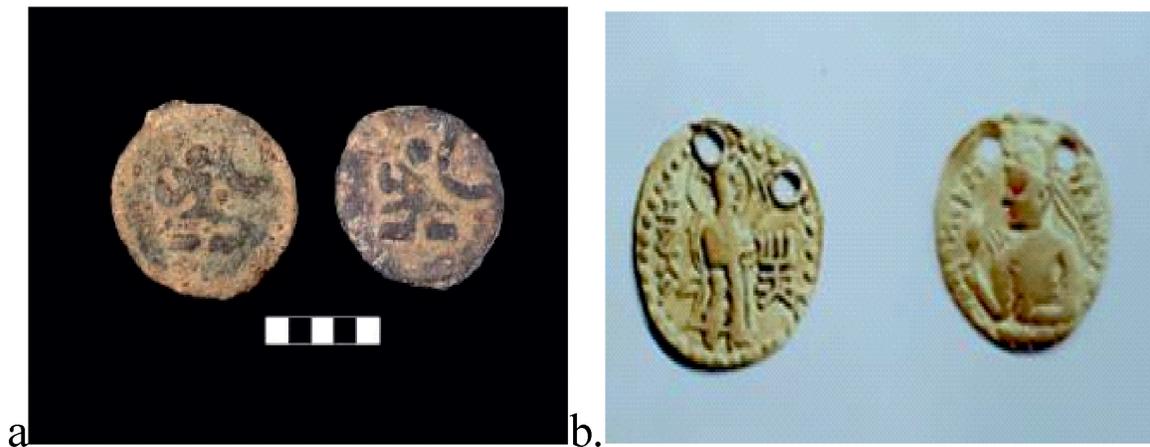


Fig. 8: a. Punch Mark coins b. Kushana Gold Coin

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

fragmentary artefacts were collected from the excavations. Terracotta pendants of a greater variety of styles and decorations which are of Buddhist in nature are retrieved from the site. Some of them are having impressions of Bodhi tree, *triratna*, lotus, etc. The moulded items often exhibit decorative motifs ranging from embossed concentric circles to floral and geometric designs. Of the terracotta ornaments from Radhanagar, pendants exhibit the greatest diversity of size, shape, and decoration. Terracotta pendants were never hand formed and were made utilizing only the moulded technique that produced an embossed design (there were no plain pendants). A total 4 terracotta Roman bullae have been found which are circular pendants with human head in profile. These bullae were widely distributed from various sites including Sisupalgarh of the period first-second century CE. (Fig.9.). The terracotta snake figurines have been retrieved in good number which makes us understand that the site preserves the ancient tradition of snake worship in Buddhism. (fig. 9b). In fact large number Mucchalinda Buddha images are found from nearby Lalitgiri

Buddhist site



Fig. 9: Terracotta Objects a. Bullae , b. Snake, c. The Buddha Head. d. Lion

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. The Lion figurine which is found in the Sunga-Kushana level is very much similar with the Sunga terracotta figurines (Mathur 1996). 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.9.c & d) 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.

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. 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.

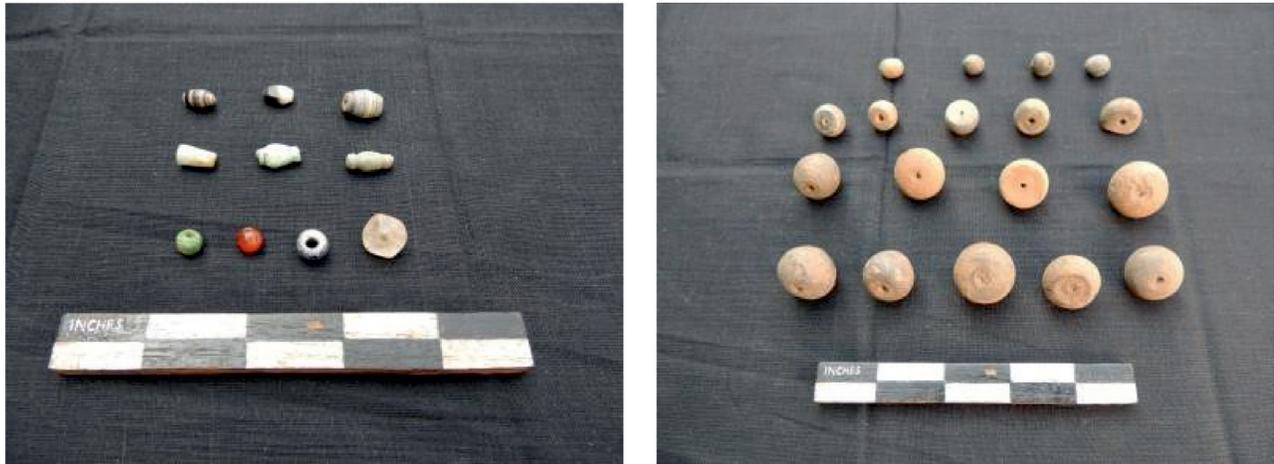


Fig. 10: Beads of various size

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 CE as has happened in many early historic sites of India.

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 4th century BCE now it is confirmed that early urbanism begins around 4th century BCE at Radhanagar and continued to grow up to 3rd-4th century CE as discussed. Radhanagar (Kankia) like Rajgriha was a city-centre with good defences and moats. Megasthenes has given a good description of the capital city and its defensive measure (Mc Crandle,1979rpt)). Monumental architecture began in north and central India from the 6th-5th century BCE, but in western India and the Deccan it appeared in 3rd -2nd century BCE. Pliny records there were thirty fortified towns in the Satavahana kingdom, and some of them like Sannathi (Ranamandalam) 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, Asurgarh,

Kharligarh (Odisha), Chndraketugarh, Tamluk (Tamralipti, West Bengal). Dantapura, Dhanyakataka, Amravathi, Kondapur (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 coastal route connecting Buddhist sites as monks and merchants were the main architects of these series of Buddhist monastic and stupa sites.

Observation

Radhanagar (Kankia) 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. In this context, urban centres developed in Andhra, Telangana 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. It is imperative to mention that Kalinga and Andhra Desha were in one circuit of cultural growth as we are getting reference of Sri Sada in the Hatigumpha inscription of Kharavela and in Guntupalli Pillar inscription. Again, largest number of Sada coins have been found in Amaravati and its surroundings of Dharnaikota and Vadamanu. (Parasarsen, 2021:95-97) Sri Sada as referred to in the inscriptions was the successor of emperor Kharavela of Kalinga and ruled to as Maharaja of Kalinga-Mahisasaka country of the Mahameghavahana (family) during first century BCE / CE (c.40 BCE to c.100 CE). (Prasad, 1993 : 53-62). This reference and archaeological finds make us to understand that the cultural efflorescence in Mahanadi and Godavari-Krishna delta are one and same from 3rd century BCE to 3rd century CE. Further, 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 and Maritime Trade Routes. The major trade routes to the south went through Kalinga and also had resources that were coveted by the Mauryas. The information provided by Kautilya in his *Arthashastra*, for example indicates that Kalinga produced some of the best war elephants. (Olivelle, 2023:23).

It may be mentioned that the geographical references in the inscriptions that Pataliputra was the capital in days of Ashoka's grandfather Chandragupta. Kosambi, Ujjain. Takshasila (Taxila), Suvarnagiri (Karnataka) and Toshali and Samapa (Odisha) in Kalinga country are important centres of provincial administration that are expressly mentioned. The Viceroys of Toshali and Ujjain are called *Kumara* in the Kalinga edicts and *Aryaputra* is the term by which the viceroy of Suvarnagiri is described in the Mysore (Brhamagiri-Sddhapura) Edicts. There were Mahamatras who were *Nagara-Vyavaharakas* at Toshali and Sampa in Kalinga. They were obviously the same as the *Paurayavaharikas* of Kautilya. They administered justice in the cities as the *rajukas* did in rural areas. (Sastri, 1967 (1988): 224-226). Mauryan emperor Ashoka during 3rd century BCE, declared

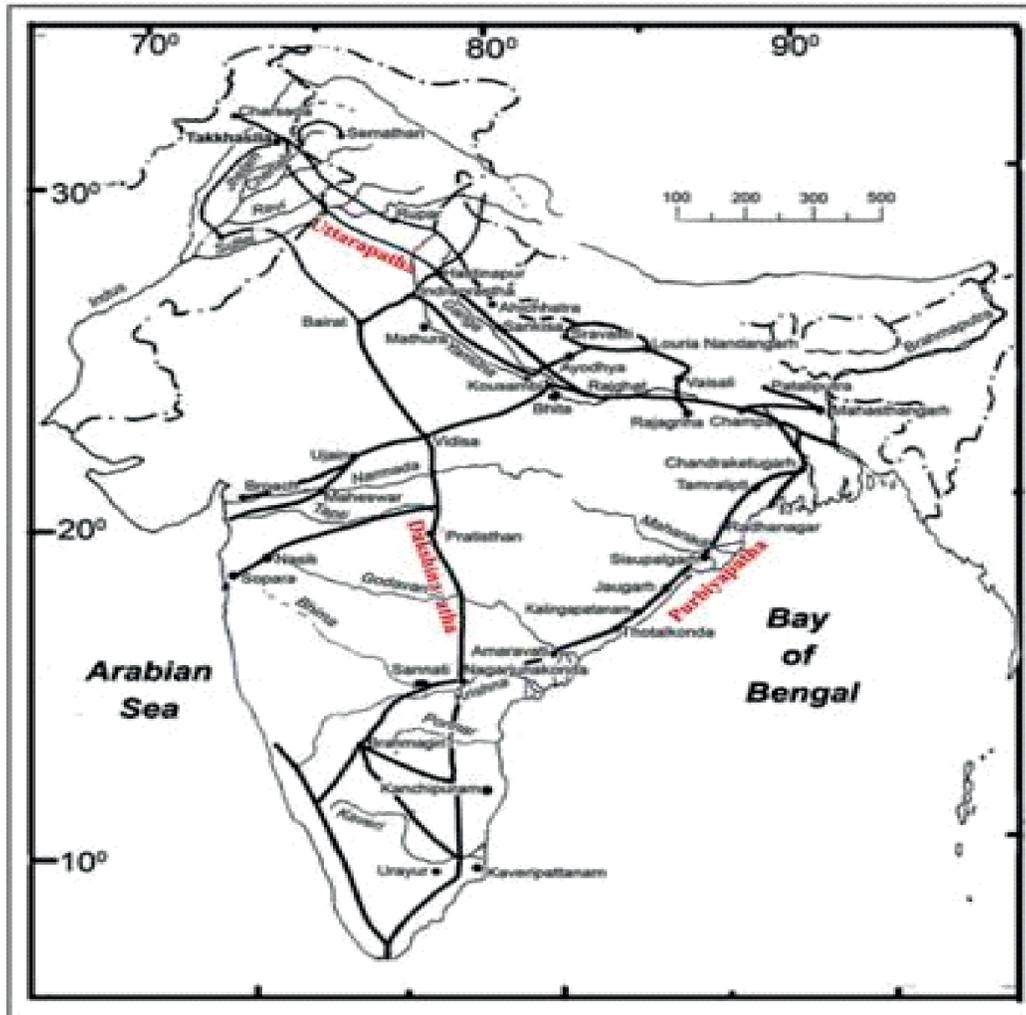


Fig. 12: The Eastern Trade Route (*Purbiyapatha*)

pilgrimage as “*Dharmayatra*” or “Tours of Piety”. Emperor Ashoka (c. 269-32 BCE.) had built 84,000 Buddhist monuments throughout the empire along with the foot-steps of Buddha. The Buddhist monuments are stupas, pillars, chaityas, monasteries and rock-cut caves, dedicated for the masters of Buddhist world or residents regarding interpretation of the cannons preached by Buddha. During the second council of the monks (the Sangha) held at Vaisali, two separate schools of Buddhism clearly emerged, namely Hinayana and Mahayana or Mahasanghika. The Mahasanghika later on became Mahayana school. Hinayanists called themselves as Theravadi. Theravadi monks visited Kalinga and stayed here to propagate Buddhism and educate the monks of Odisha (Patnaik, 2021). Asoka built a monastery for Theravadin Monk- Tissa, at Bhojakagiri. (Sahu,1958). Incidentally, an inscription inscribed as *Sadabhu Tissa* in Brahmi script of third- second century BCE have been reported from Radhanagar Excavation. It is referred to a large number of Buddhist Stupas were built by the emperor Asoka in Kalinga to glorify Buddhism of which three have been proved. These are Lalitgiri, Langudi, and Aragarh. (Patnaik, 2020). The excavated Stupa remains available on the hill top of the hill of same name in Godiput Panchayat of Puri District is a significant discovery which tells the story early Buddhist architecture and the earliest form of Theravada Buddhism in Odishan region. Not only that

the Buddhist settlements of Odisha like Radhanagar, Langudi, Lalitgiri, Dhauli, Aragarah, Jaugarh had the pilgrim network connecting through trade routes to the extreme region of Taxila (present day Afganisthan) in north to Suvarnagiri (Karnataka) in south. It is known from our recent research that in the 13thregnal year emperor Ashoka undertook a *Dharmayatra* to the south. The contents of the Minor Rock Edicts suggest that having spent 256 days in the tour Ashoka reached Suvarnagiri from which he issued orders to the governor at Isila.(Thapar, 2013:50-51). As evidences from excavated sites at Radhanagar, Dhauli, Aragarh, Jaugarh,(Odisha), Salihundam, Ramtirtham, Thatlakonda, Kottur, Vengi, Bhattiprolu, Chandvaram,Dhanyakataka,(Andhrapradesh) suggest Ashoka might have followed eastward route (may be termed as *Purbiyapatha*) along the coast.(Fig.12). The number of days he had spent would suggest that it was not mere a whirlwind tour. In the course of leisurely undertaken tour, Ashoka should have visited the said places and supervised the building activity at the places. He planted a Pillar Edict at Dhanyakataka, a Minor Edict at Rajulamandagiri (Kurnool) and all four Rock Edicts at Erragudi besides Rock Edicts at Dhauli and Jaugarah. (JAHRS,1995:69.)andSanthi. All these places located in the South Eastern India and well- connected which at the beginning of our historical period flows the idea of *Dhamma*, Trade and Pilgrimage which all made Kalinga, Andhra and Karnataka as stronghold of Buddhism during 3rd -2nd century BCE. The prosperity at the Buddhist sites of Lalitgiri,Langudi, Radhanagar, Aragarh, Salihundam and the existence of urban centres at Sisupalgarh, Jaugarh, Lathi, and the reference of port sites of Palur and Kalingapatnam during 3rd-2nd century BCE till early medieval period singularly point towards thriving trade and commercial enterprise in the coastal trade route.

Radhanagar was an urban centre and the inhabitants were mostly Buddhist as almost all antiquities like *triratna* symbols, sprinklers, pendants, terracotta Buddha images etc., have been discovered which are all Buddhist in nature. Hence, the settlement points to be an ancient and most prosperous palace city with adjacent mountain settlements in the region of Kalinga. Some scholars interpret that this settlement with the earliest city of Dantapura referred to in Pali literature (Prusti, Mohanty&Mishra,2000) and some also referred to as Toshali Nagar. Here, it may be mention that Emperor Ashoka issued orders to *Nagar Vyavaharikas* and others of Toshali directly when a Kumara remained in charge of the province, and not through the Kumara himself as referred to in the RE XIII. Separate Kalinga Edict I mention several such princes were also stationed at Ujjain and Taxila. Ashoka sends instructions to those at Ujjain, Toshali and Taxila. At Toshali the governor's office included both prince and several mahamatras. Perhaps for that reason we are getting several seals from Radhanagar. The Mahamatras operated both at the central level in Pataliputra and in provincial centres.(Olivelle,2023:33).This shows a full-fledged Nagar with administrative measures which is very well discernible from the archaeological remains at Radhanagar. But, in the present state of research, it is possible to infer this much as conclusion. So far, Toshali, the provincial headquarter of Ashoka and an important urban centre of third century BCE is identified with Sisupalgarh-Dhaulti. (Sahu 1964, Brandtner,1988-89) but the Sisupalgarh excavations show that the urban character emerged only towards late second century or early first century BCE without any notable findings of Buddhism. (Lal 1949, Smith and Mohanty 2008). The excavations at Radhanagar solved this long standing identification. So far, Radhanagra urban settlement has been dated to fourth century BCE (BETA Lab Sample No 62779). All the material evidences with well laid out fortification akin to Dhulikota, and Datnapura, and

suggest it was absolutely an important royal settlement of fourth-third century BCE and continued to prosper up to 3rd 4th century CE which all denote as a city centre of Mauryan period. However, this settlement, judging all the material culture and inscriptional evidences, clearly indicates the site as the city of Mauryan period was ToshaliNagar, the provincial headquarters of emperor Ashoka. (Chakrabarti,2011:67-71,Lahiri, 2016: 220-21). However, Dhauli having Rock-Cut Elephant and Asokan Edict near Sisupalgarh was on the trade route might be a pilgrim centre like that of Langudi. Sisupalgarh is more appropriate as Kalinganagari-the capital city of emperor Kharavela. Hence, the contribution of Radhanagar excavation to the socio-economic history of India is more significant so far South Eastern India is concerned. The excavations at Radhanagar have changed the perspective of early historical archaeology of Odisha, so far research done in the areas of Buddhism, Trade and Urbanisation. More so, aspects of socio-economic history of early Odisha (Kalinga) could also be inferred.

References

- Brandtner, M.1988-89, 'Archaeological Explorations around Bhubaneswar', *Manav* 3. Chattopadhyaya, B.D. (ed.), 2003, *Studying Early India*, New Delhi: Permanent Black. Chakrabarti, D.K. 2011, *Historical Geography of the Ashokan Edicts*, Delhi, Aryan International.
- Chakrabarti, D.K. 2010, *The Ancient Routes of the Deccan and the Southern Peninsula*, New Delhi: Aryan International.
- Dhavalikar, M.K. 1999, *Early Historical Archaeology*, Delhi, Books & Books.
- Gogte, V.T. 1997, 'The Chandrakhetur region –Tamluk region of Bengal: Source of Early Historic Rouletted ware from India and Southeast Asia', *Man & Environment*. 22, (1).
- Indian Archaeology, 2012-13 - A Review, Excavations at Kankia (Radhanagar). *Journal of Andhra Historical Research Society*, Vol. XXXIX, 1995.
- Lahiri Nayanjot. 2016, *Ashoka in Ancient India*, Ranikhet, Permanent Black. Malalasekhara, G.P. 1960, *Dictionary of Pali Proper Names*, I and II, London.
- Mathur, V.K. 1996, *Art and Culture under the Sungas*, Bharatiya Kala Prakshan, Delhi.
- Mishra, J. 2005, 'Radhanagar and Beyond: Pattern, Process and Structure of Early Urbanisation in South Eastern India', In Chakravarti K.K., G.L.Badam,2005,*River Valley Cultures of India*, New Delhi, IGRMS & Aryan Books International.
- Mc Crandle, W,1979 (rpt.), *Ancient India as described by Ptolemy*. Book VII, Delhi, Munishram Manoharlal, Mukharjee, B.N. 1997, 'A Fragmentary Inscription referring Ashoka', *Journal of Epigraphical Society of India* Vol.24.
- 1997, *UtkalaPradipa*, Vol.1-2, Bhubaneswar, Utkal University NilakntahSastri, K.A.1967 (1988, rpt.) Ed. *Age of Nandas and Mauryas*, Delhi: MLBD, OlivellePetrick, 2023, *Ashoka* , Gurugram, Harper Collins.
- Patnaik, S.K. 2015, *Excavations at Radhanagar*, Bhubaneswar, OIMSEAS: Government of Odisha.
- Patnaik, S.K, Prabhakar Upadhyay, Prantap Pradhan,2014-15, 'Iron Objects from the Excavations at Kankia (Radhanagar), Jajpur, Odisha', In Bharati, Bulletin of the Department of AIHC& A, BHU. Vol.39, 2014-15, pp. 138-148.

- Patnaik, S.K & G.C. Pradhan, 2015, 'Contextualizing Buddhist Settlements : A Study of Epigraphical Remains in Dharmasala Area, Jajpur, Odisha'. In Acharya S.K, ed. 2015, *Studies on Odishan Epigraphy*, Delhi : Pratibha Prakshan.
- Patnaik S.K, 2020, *Early Buddhist Art of Odisha*, Delhi, World Buddhist Press.
- Patnaik, S.K. 2021 (3rd Edn) , *Buddhist Heritage of Odisha*, Bhubaneswar : Mayur Publications. Patnaik, S.K & S. Nayak. 2020, 'Buddhist Settlements in South East India' *Arnava*, Vol. IX, No.2. Varanasi.
- Pradhan, Debraj. 2000. 'Stupa discovered in Orissa, India'. Circle of Inner Asian Art. SOAS. News letter. Issue 11. London
- Pradhan, Devraj. June 2001. 'Two rare statues of Asoka discovered at Langudi Hill, Orissa. India'. Circle of inner Asian Art. SOAS. Issue 13. London
- Prasad, P.R. K. 1993, 'Sada Coins in Coastal Andhra' In Narasimha Murty A.V. Ed. *Studies in South Indian Coins*, Vol. 3, Madras, New Era Publications.
- Prusti, H, Mohanty, & J. Mishra, 'Dantapura, the Capital of Ancient Kalinga' In Basa K.K, P. Mohnaty. Ed, 2000, *Archaeology of Orissa*, Vol. 11, Delhi, Pratibha Prakshan.
- Ray, N.R. 1980, *Bangalir Itihasa* , Adi Parva , 3rd Edn , Calcutta.
- Ray, Amita. 1983, *Life and Art of Early Andhradesa*, Delhi, B.R. Publishing Corporation.
- Ray, Amita, 2001, 'Beginning of Urbanisation in Andhradesa', In I.K. Sharma, B. Vidyadhara Eds, 2001. *Sri Subrahanya Smriti*, New Delhi, Sandeep Prakshan, pp. 287-297. Sahu, B.P. 2020, *The Making of Regions in Indian History*, Delhi, Primus.
- Sahu, N.K. 1958, *Buddhism in Orissa*, Bhubaneswar: Utkal University.
- Sarkar, H. 1987, 'Emergence of Urban Centres in Early Historical Andhradesa', In Pande B.N, B.D. Chattopadhyaya Ed. 1987, *Archaeology and History*, Delhi : Agam Kala Prakashan.
- Senaviratne, S. 1980-81. 'Kalinga and Andhra: The Process of secondary state formation in Early India'. *The Indian Historical Review*, Vol. 7 (1-2): ICHR, New Delhi.
- Senparasher, A. 2021, *Settlement and Local Histories of the Early Deccan*. New Delhi, Manohar.
- Schenk, H. 2014. 'Tissamaharama Pottery Sequence and Early Historic Maritime Silk Route across Indian Ocean', In *Zeitschrift fur Archaeologie Aussereuropaischer Kulturen*, Band 6. Wiesbaden , Reichert Verlag.
- Sivanantham R, 2019, *KEELADI*, Department of Archaeology, Govt. of Tamil Nadu, Chennai.
- Thapar, R, 2012, *Ashoka and the Decline of Mauryas*, (3rd Edn.), Delhi: Oxford University Press.
- Tripathi S, Prabh G, Patnaik S.K. *et.al*, 2019, 'A preliminary study of Knobbed ware from Odisha' *Man and Environment*, Vol. 44 (1).
- Tripathy, S. 1986, *Early and Medieval Coins and Currency System of Orissa, circa 300 BCE to 1568 CE*, Calcutta, Punthi Pustak.
- Yule, P. 2006, *Early Historic Sites in Orissa*, New Delhi, Pragun Publications.