

# ARCHAEOLOGY AND THE MARITIME HISTORY OF ANCIENT ORISSA

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Maritime archaeology, which is concerned with the maritime activities, opens up new vistas in the field of research on the Orissan history. Orissa has a rich maritime heritage. Till the recent past, scholars for the reconstruction of her maritime history had to depend primarily on the literature, fairs, festivals and fictions. But in the last decade, particularly after 1990 there is a remarkable change in the perception of maritime heritage and in writing of the Orissan maritime history; it happens so because of the considerable progress of maritime archaeology. It is the archaeological excavation that has unearthed a number of ports *i.e.* Tamralipti, Chelitalo/Manikapatna, Khalkattapatna, Palur/ Dantapura, Kalingapatnam, and urban centres like Sisupalagarh, Dhauli, Jaugarh, Golbai etc. which tangibly indicate the Orissan maritime activities on a firm footing. It also proved ancient Orissa's maritime interaction with the South-East Asia and Western world. Archaeological excavation, indeed, has tremendous contribution towards surfacing the glorious maritime heritage of Orissa.

Maritime archaeology does not connote merely the study of archaeological remains under water, rather it includes the study of various aspects such as identification of landing places, harbours, the nature of wood working, sea routes, cargo items etc.<sup>1</sup> and involves interdisciplinary approaches as so many aspects are to be dealt with. The authenticated maritime history of India can be traced to the proto historic Indus Valley Civilization/ Harappan culture *i.e.* to the third Millennium B.C Maritime archaeology in India, however, received an impetus with the establishment of a Marine Archaeological Centre at the National Institute of Oceanography in Goa and Govt. college for Boys sector-II Chandigarh (U.T) under the leadership of S.R. Rao. In this paper an attempt has been made to reconstruct and analyse the maritime heritage of Orissa on the basis of archaeological excavated and explored materials along with epigraphic records, numismatics and art, architecture and sculptural evidences. It also intended to deal with the problems and prospects of maritime archaeology of Orissa.

Orissa is veritably an *El dorado* of archaeological remains lying scattered throughout the state. The recovery of some pre-historic tools in Orissa in the 2<sup>nd</sup> half of the 19<sup>th</sup> century by V. Ball<sup>2</sup> and exploration of some pre-historic sites, initially have given us an idea regarding the progress of society from food hunter to settled life and food production. The excavation of Kuliana, Kuchai and Baidyapur in the Mayurbhanja district of Orissa have yielded the evidences of the use of polished shouldered tools, rice and cord-

impressed pottery in the Neolithic age. In view of the technological affinities of shouldered adzes with those of Southeast Asian countries it is believed that Orissa's maritime connection with Southeast Asia probably began from the Neolithic period<sup>3</sup>. However, the possibility of introduction of shouldered adzes into India through land-route via north-east India cannot be ruled out.

At Sankarjung in the Angul district, the initial spadework by the department of Archaeology, Government of Orissa, surfaced the cultural stratum of Chalcolithic period. From here polished stone celts in association with hand-made pottery have been excavated. Some of the celts are quite narrow but large in size, and have, thus, been described as bar-celts. On the basis of bar-celts discovered from Sankarjung it could be argued that they were the earliest musical instruments in India. They were also similar in structure to those of in Vietnam<sup>4</sup>. Thus, it is assumed that Kalinga might have cultural link with Vietnam in very ancient times.

The excavation conducted by the Sambalpur University at Manamunda, a site located on the right bank of the river Mahanadi at the confluence where Tel river merges with the Mahanadi revealed the evidence of the existence of Chalcolithic civilization there<sup>5</sup>. That period was succeeded by a period in which Megalithic pottery and iron tools were present. The excavation at Asurgarh<sup>6</sup> in the Kalahandi district showed that the site was inhabited from the third century B.C. A large number of black and red ware potteries, black polished ware, iron objects like axes, hooks, beads of semi-precious stones and especially a large number of punch-marked coins belonging to the pre-Mauryan, Mauryan and post-Mauryan periods have been discovered from this site. A comparative study of all these excavated materials with those from others apparently suggests that the process of cultural development was simultaneous both in the coastal region and in the uplands of western Orissa. Possibly there was a lasting interaction between these two regions and by the way with the far off countries.

The recent excavations conducted at Golbai Sasan (Lat. 20° 01' N. and Long. 88° 05' E) in Khurdha district by the Excavation branch, Archaeological Survey of India (ASI), Bhubaneswar under B.K. Sinha<sup>8</sup> has provide us evidences of "Copper Age" along with a sequence from the Neolithic period to the iron Age. On the basis of the materials obtained from the excavation, the sequence of culture can be divided into three phases, *i.e.* period I Neolithic (*cir.* 1600 B.C) period II-A, Chalcolithic (Evidence of copper, *cir.* 1400 B.C to *cir.* 900B.C) and period II B Iron Age (*cir.* 900 B.C. to *cir.* 800B.C). However, the latest determination of dates by C<sup>14</sup> traced the earliest level of Golbai even to 2300 B.C. The site is located on the left bank of the river Malaguni or Mandakini, a tributary of the Daya, which falls into the Chilika Lake. Its location on the bank of a river which has access into the Chilika Lake supply us some positive evidences of the maritime activities of this region. A large number of material remains such as tools of stone, bone and copper have been discovered from this site. The polished tools include celts, adzes, shouldered celt, chisel, etc. The bone tools, made of antler and semimineralised bone

comprised digging tools, points, burin, chisel, long points (27 cms.) arrowheads and harpoon. The copper objects obtained from the site include bangle, rings, chisel and a fishing hook. However, among these discoveries, particularly, the bone implements, harpoons and polished stone adzes indicate a culture where people possibly lived mainly on fishing, and probably building boats<sup>9</sup>. Especially, the recovery of a sizeable number of adzes for wood working gives the positive indication that Golbai was a boat-building centre. It is significant to note that Golbai is the only excavated site so far wherefrom only the indication of boat building has been revealed. Further, the location of the site on the bank of the river Malaguni positively indicate that the Chilika Lake was very close to this place during the ancient period. Thus, it facilitated the maritime trade of the people of the adjoining sites.

Palur (Lat 19° 27' E. and Long 85° 11' N.) which has been referred to by Ptolemy<sup>10</sup> as Paloura during the 2<sup>nd</sup> century A.D was an important port of ancient Orissa. It has been identified with the modern Palur village near Rushikulya river of the Ganjam district. It occupied an enviable position on the trade route between India and the South-east Asia and acted as the only port of departure to the Far East on the Coromondal coast in the early centuries A.D. The archaeological exploration by A. Nath of ASI and K.S. Behera around Palur (Kantigarh), which unearthed fragments of the Chinese celadon ware, the Roman rouletted ware, amphora pieces etc. substantially testify to Palur as a port of international repute<sup>11</sup>. Recent survey by K.K. Basa<sup>12</sup> of Utkal University and others around Palur and in the region south of Chilika Lake Yielded interesting results about the maritime archaeology of Orissa. Among others the finding of one monolithic granite pillar on a hill top of about 60 to 70m. height near Rahunathpur which now is worshipped as a **Siva Linga** is remarkable. It is interpreted that it could be a light house for the ancient sea-farers. It is reported that at Gourangapatna, a village near Palur, the surveyers have discovered 'a stamped boat motif' which is the first of its kind from an archaeological site in Orissa. K.K. Basa is of the opinion that the motif is associated with a stamp, which could belong to a guild. However, on the basis of only this finding it would be difficult to presume that there was a boat-building centre.

Orissa, in the early centuries before the Christian era owing to the exploitation and use of iron and development of agriculture, underwent transformation in the economic fields. As a result of economic development urban settlements like Tosali (Dhauri), Samapa (Jaugada) and others came into prominence. Urban centres played a prominent role in shaping the destiny of ancient Orissa and in its foreign relations through overseas. The evidence of urban settlements in coastal Orissa comes from the excavations at Dhauri and Jaugada, which were also the political nerve centres of Kalinga under Asoka Maurya.<sup>13</sup> At Jaugada<sup>14</sup> (Lat. 10° 31' N. and long 84° 57' E), the excavation has revealed a full-fledged iron-using culture. A number of material remains like plain pottery, painted pottery, knobbed vessels, iron implements, beads of shell, bone, agate, crystal, carnelian, quartz etc. have been discovered from this site. The punch-marked coins and Puri-Kushana coins were also collected from here. The fortification around Jaugada consisted of an

earthen rampart. Similarly, the excavation conducted at Dhauli supplemented to the fact that during the period of Asoka there was the progress of urbanisation in Orissa. The process of urbanization and emergence of urban centres probably encouraged the merchants of Kalinga to carry on trans-oceanic commerce in ancient times. Further, strategically the location of Asokan Edicts on the coastal districts of Orissa established the maritime activities at least of two ports, *i.e.*, Che-li-ta-lo/ Manikpatna and Palur.

The systematic excavation at Sisupalagarh (Lat. 20° 13' 30" N. and Long. 85° 51' 30" E.) near Bhubaneswar by B.B. Lal<sup>15</sup> of A S I and subsequently by the State Department of Archaeology provide concrete evidence of a well planned early historical fortified city of Orissa. The site of Sisupalagarh has been identified with Tosali, the provincial capital of the emperor Asoka and Kalinganagari, the capital city of the Chedi dynasty under Kharavela. The excavations revealed that the site remained under occupation between the 3<sup>rd</sup> century B.C to middle of the 4<sup>th</sup> century A.D. The site was in the form of a fort with a rough square in plan each of its side measured about three quarters of a mile long and encloses an area, a little over half a square mile. The excavations revealed one integral culture throughout different stages and have brought into light knobbed ware, glass beads, semi-precious stone beads, rouletted ware, clay bullae resembling Silenu's head imitated from those of Roman coins, a unique medallion showing "Kushana type of standing king and a Brahmi legend in character of third century A.D on the obverse and Roman head with a Roman legend on the reverse"<sup>16</sup>. Among the coins, the Murunda gold coins, silver punch-marked coins with Ujjain and Eran symbols etc. are significant. However, one of the most concrete data obtained from the excavation is that it proves ancient Orissa's maritime contact with the Roman world on firm footing. Further, the discovery of rouletted ware which is regarded as an important evidence for Indo-Roman trade from Sisupalagarh, Manikpatna, and Radhanagara in Orissa, Chandraketugarh, Tamluk in West Bengal, Salihundam, Dharanikota in Andhra Pradesh, Kaveripatnam, Uraiyur and Arikamedu in Tamilnadu and from Buni complex in North Java, from Sembiran on the north coast of Bali, Vietnam, Sri Lanka, Bangladesh etc. implied the Roman trade net-work among these places. It also suggests a trade route connecting the eastern coast of India with the Southeast Asia<sup>17</sup>.

The excavation at Bamanaghati in the Mayurbhanja district of Orissa and Tamluk in the Midnapur district of west Bengal (Tamluk in ancient times known as Tamralipti was in Orissa) also testify to the flourishing maritime trade of ancient Orissa. A large number of rouletted ware have been discovered from the ancient port site of Tamralipti<sup>18</sup>. They were probably brought to Orissa by the Roman merchants. The finding of Ganga fanams<sup>19</sup> from Tamralipti further proved the fact that it was a port of Orissa under the suzerainty of the Imperial Ganges. A hoard of fine gold coins of the Roman origin have also been discovered from the Bamanghati area<sup>20</sup>. These findings suggest trade relation of ancient Orissa with the Roman Empire. Beglar who has reported about this for the first time speculated that those gold coins came to Mayurbhanja in early part of the Christian era through the sea-port of Tamralipti. From this we infer that there was trade relation between

the Roman world and Mayurbhanj via the port of Tamralipti<sup>21</sup>. The report of Beglar on the findings of Roman gold coins from Bamanaghati is as follows<sup>22</sup>. “some years ago a great find of gold coins containing among others, several of the Roman emperors, Constantine, Gordian etc. in most beautiful preservation, was found near Bamanghati....” The availability of these coins at Bamanghati shows that it lay on some great line of road from the sea-port of Tamluk to the interior, for it is more probable that they came in via Tamluk than overland from the Roman empire. A terracotta tablet containing the thanks giving of an unknown Greek sailor to the East wind has been discovered at Tilda, situated between Tamluk and Bamanghati<sup>23</sup>. The excavation at Barabati<sup>24</sup> (Lat 20° 29' N. and Long. 85° E) fort situated on the right bank of the river Mahanadi of Cuttack district also provide us some welcome light on the maritime trade of the people of ancient Orissa. A few sherds of Chinese ceramics have been discovered from Barabati.

The excavations at Lalitgiri (Lat. 20° 35' N. and Long. 86°15' E) Udayagiri (Lat. 20° 38' 45" N. and long. 86° 16' 25" E) and Ratnagiri (Lat. 20° 38' N. and long 86° 20' E), the Buddhist sites, have established sculptural link of Orissa with the Southeast Asia and China. The discovery of relic caskets from a stupa at Lalitgiri has been the most significant one in this connection. The system of preserving of these relics are unique. These caskets cover four-in –one, kept systematically one inside the other. It is a feature alien in Orissa but common in China. Further, a sculpture of Astamahabhaya Tara, who protect sailors from ship-wreck, has been found from Ratnagiri<sup>25</sup>.

The material evidence from the recent archaeological excavation at Manikpatna, in the northern tip of Chilika and Khalkatapatana, on the left bank of Kushabhadra river near Konarak supply us sufficient clue of Orissa's overseas contact with far off countries. The excavated material remains also prove that they were international ports having contact with many countries. Manikapatna recently has been identified with the Che-li-ta-lo port of Hiuen Tsang<sup>26</sup>. The discovery of Chinese celadone ware, white porcelain, blue, white and brown glazed porcelain sherds, Roman rouletted pottery and fragments of amphora, knobbed ware, Burmese pottery, Ceylonese coins, Siamese pottery, Indonesian terracotta, egg white Arabian pottery moulded ware, stamped ware, Decorated were, kaolin ware etc. at Manikpatna testify to its trade link with far off countries<sup>27</sup>. The discovery of rouletted ware, fragments of amphora etc indicate its contact with the Roman Empire in the early centuries of the Christian era. The rouletted wares of Manikpatna have much similarity with those of Sisupalagarh and Arikamedu. They are made of fine fabric with well levigated clay and are of grayish white colours. Contact with China is established through the discovery of Chinese celadone ware datable to different centuries. The trade link with Burma is proved by the discovery of a brown glazed ware, known as Maratuan ware after the name of the place located in Burma. The discovery of two imported wares, *i.e* a thin egg white glazed pottery and thick Chocolate glazed wares indicate its contact with the Arabian countries. The discovery of one Celonese coin with the legend “**Srimad Sahassamalla**” (*cir.* 11<sup>th</sup> –12<sup>th</sup> CAD) from Manikpatna refers to the contact of this port with Sri Lanka. A terracotta animal figure of Indonesian character which is of great

importance is also reported from here. The two lined Kharosthi inscription on a pot shred discovered from here has been deciphered as “*Dasatradeva*” and ‘*Khida*’ of 2<sup>nd</sup> century A.D (by B.N Mukherjee)<sup>28</sup>. This infact, is the only instance of a *Kharosthi* inscription in the whole of Kalinga or even in eastern and southeastern India. Among other notable findings from Manikpatna are a large number of beads of terracotta, agate, soft stone and bone, iron implements such as harpoon, spearhead, sickle, fishhooks, boat nails, iron slag’s, varieties of bangles in terracotta faience, glass beads and conch-shell. Besides, terracotta lamps in various sixes and varieties and pottery of grey, red, buff and black coloured ware also find. From the above findings it is evident that Manikpatna was an important port-cum-trading centre for the indigenious as well as foreign sailors and merchants. This, in fact is the only site in the entire east coast of India from where so many varieties of imported wares have been found.

The excavation at Khalkattapatna<sup>29</sup> (Long.86<sup>o</sup>. 02 40” E. and Lat. 19<sup>o</sup> 51’ 13” N.) has revealed the existence of a brick-jelly floor which might have served as a loading and unloading platform. The pottery recovered from here consists of Chinese celadone ware; Chinese porcelain with blue floral design on white background, egg white glazed ware and glazed chocolate ware, all of foreign origin. Besides, the Chinese celadone ware and Chinese porcelain, the most important finds of the Chinese origin from excavation are two circular Chinese copper coins, one complete and the other fragmentary, datable to *circa* 14<sup>th</sup> century A.D. The circular copper coin has a square perforation in the centre and a legend in the Chinese character. The egg-white glazed pottery obtained from the site is supposed to be from the Arab countries and suggests the sea-trade with the countries on the west. The associated indigenious pottery consisted of dark grey and red slipped wares. The later was quantitatively much less. The shapes met with were bowls, basin’s *handis*, Vases, miniature pots and beaked lamps all-wheel turned. The pottery with stamped geometrical designs confined to neck and waist have also been found. A total of 143 antiquities were recovered and these consisted of arecanut shaped beads of terracotta, pieces of glass and copper bangles, fragmentary animal head of terracotta, miniature copper bowls and copper coins of native rulers. All these evidences establish Khalkattapatna as one of the ports of Orissa between 12<sup>th</sup> and 14<sup>th</sup> centuries AD from where merchants and traders proceeded to the Southeast Asia, china and even to the countries of the west.

Outside Orissa, the recent archaeological discoveries in Ceylon, Indonesian islands, Thailand, Vietnam, and Burma etc. also have thrown new light on Orissa’s maritime connections with those countries. An archaeological excavation at Anuradhapura in Ceylon proves the introduction of Indian cultural elements including Buddhism into Sri Lanka even before the days of Asoka<sup>30</sup>. However, the material evidence brought to light from Don Ta Phet in Thailand in the forms of semiprecious stone and glass beads, knobbed base bronze vessels etc. tangibly indicate the brisk commercial contact of Orissa with Thailand. The knobbed ware pottery for the first time was identified at Sisupalagarh and subsequently at several sites of Eastern India and the Ganga valley. In view of the

knowledge of knobbed ware technique and rich deposit of semi-precious stones in the western Orissa, in Kalahandi, Bolangir, Boud and Sambalpur areas we assume that Orissa had intimate relationship with Thailand. It has been also mentioned that the discovered bronze bowls, some of those with a central knob have much similarity in form with the so called “ Knobbed ware” found in several sites in the coastal Orissa and Bengal<sup>31</sup>. I.C. Glover<sup>32</sup> says that these knobbed base vessels were associated with Buddhist rituals.

The inscriptional and epigraphic records of Orissa and of abroad also said some authentic light on the maritime enterprises of the Kalingans. The Hatigumpha inscription (*cir.* 1<sup>st</sup> century B.C) of Kharavela infers to the existence of a navy which makes it clear that naval powers were quite common the Kalingan rulers. It also indicates that the Magadhan emperor Asoka invaded Kalinga to acquire sea-ports of Kainga as Magadha did not have any seaport of its own. The very location of the Asokan Edicts at Jaugarh, a place far away from the actual scene of the war *i.e.* Dhauli is an indication of its association with the port of Palur, a well known ancient port of Kalinga. The Tugu Rock Inscription<sup>33</sup> of western Java says that a river named Chandrabhaga, probably named after the Chandrabhaga river of Orissa was regulated by a canal. The kuki copper plate<sup>34</sup> (840 A.D.) of Java speaks of potters and all sorts of servants of inner apartments hailing from ‘Kling’ meaning Kalinga. An inscription of the Bhaumakara period refers to an ocean related tax called Samudrakarabandha. Besides, the discovery of a pot shred inscribed with Kharosthi inscription from Manikpatna is very significant.

The numismatic evidences or the coins also throw a flood of light on the overseas trade and commercial activities of ancient Orissa. Numismatic sources are the most authentic and reliable sources than others. They provide one of the instruments for discovering the yet undiscovered annals of history. The silver puchmarked coins, the so called Kushana or the Puri-Kushana coins, the Andhra-Satavahana coins and a horde of Gupta coins have been discovered from different parts of Orissa<sup>35</sup>. These coins have supplied enough information regarding the trade routes and trade centres of ancient Orissa. A large number of Kushana and Puri-Kushana coins, which have been discovered from different parts of Orissa, suggest that the Kushanas had a close commercial connection with Orissa and might have used ports of the Orissan coast as an outlet for the overseas trade contacts abroad. The stray Kushana and Gupta coins which have been discovered at different places of Orissa,<sup>36</sup> in view of their findings it seems that they were not the currency of Orissa but might have come here by the way of trade and commerce. Besides, the Roman gold coins found from Sisupalaagarh, Bamanghati, Tamralipti, and the depiction of ships on a few Andhra-Satavahana coins<sup>37</sup> of 2<sup>nd</sup> & centuries A.D corroborate to the fact that the east coast, especially the Orissan coast had brisk maritime trade with the foreign countries. It is worth while to mention that besides the above referred to sites the Roman coins are also reported from two other places in Orissa *i.e.* Gumuda and Kotpada<sup>38</sup> of the Koraput district which will throw some new light on the Orissa Roman trade network.

The maritime pride of ancient Orissa also inspired artists to depict boats in the sculptures and paintings. The earliest representation of ships in Orissa is noticed in a sculptured frieze collected from the vicinity of the Brahmeswar temple, Bhubaneswar, now preserved in the Orissa State Museum. The frieze depicts two ships, one is fully represented and in the second one only the frontal part is shown. In the first ship, it can be noticed that there are standing elephants in the front part of the ship. In the centre of the ship, two persons are represented being seated, and two sailors are shown with oars in the rear end steering the ship. K.C. Panigrahi<sup>39</sup> believes that the long ear lobes of the two seated personages show Buddhistic affinity and the persons are one prince and one princess holding something in their hands, probably the relics of Buddha, and are transporting to other countries. If the view of K.C Panigrahi is to be taken we can here mention that in ancient times prince Dantakumara and princess Hemamala had sailed to Ceylon with the Buddha's tooth relic from the port of Dantapura/Palur. The second ship which is not completely shown depicts a standing elephant on its frontal portion. Below the ships graphic depiction of waves with aquatic and amphibious animals can be observed. From this depiction it may be inferred that probably the sculptural panel depicts the transportation of elephants from Orissa by ship to other countries. Further, the sculpture justify at least two points that the ships of ancient Orissa were well built and were big and strong enough to carry elephants, and that elephant was an item of export among many other items. The panel may be dated back to ninth Century A.D. Near the same Brahmeswar temple another interesting slab containing an eight armed image of **Mahishamardini** Durga is laying under a banyan tree having representation of a boat below the pedestal of the goddess. The goddess is supposed to have been engaged in a fierce sea-battle with the ferocious demon Mahisasura (as reveals out of the trunk of a buffalo). The goddess in here four hands holds discus, shield, snake and arrow-head. Unfortunately her other four hands are severely damaged. The scenes represent a naval fight and such naval fight between the goddess and the demon are extremely rare in the Hindu art. The image on archaeological ground is datable to the 9<sup>th</sup> Century A.D.

In Bhubaneswar, there is a temple on the western side of Bindusagara tank which requires to be discussed in this connection. The temple is called **Vaital Deul** after the peculiar form of its roof resembling a ship or boat capsized<sup>40</sup>. The word **Vaitra** denoted a ship<sup>41</sup>, and as the roof of this temple resembles an overturned boat it is reasonable to call it as **Vaital Deul**. M.M. Ganguly<sup>42</sup> says; "The **Mastaka** is technically called **Voita** and hence the name of the **dewl**. The term **Vaita** is probably a contraction of the Sanskrit word **Vahitra** which means a sea-going vessel or ship. The external appearance of the **mastaka** is similar to the hull of a ship reversed, and with the ends removed by planes at right angles to the longitudinal axis. The three crowning members resemble the masts of a ship". Another magnificent representation of a boat can be noticed in the Lingaraj Temple of Bhubaneswar (11<sup>th</sup> century A.D.). The scene represents a women steering a boat with an oar<sup>43</sup>. The depiction of a women steering a boat is a unique specimen in the History of Indian art tradition. It indicate that maritime activities was so popular

among the people of Orissa that even the women were associated with the steering of the boat.

At Konarak, on the **Beki** (parapet) of the **Jagamohana** of the Sun temple, the **Martanda Bhairavas** are shown as dancing on boats<sup>44</sup>. Another interesting stone sculputre of a full-fledged boat of Orissa, supposed to have been collected from Konarak and now sheltered in the Indian Museum, Calcutta, depicts a boat being rowed by four persons. It is observed from this sculputre that in the middle of the boat there is a cabin with an upraised platform inside, and a man probably of a royal personage is sitting with a bow and arrow. This type of boat on the basis of the location of the cabin is called as **Madhya Mandira** type of royal pleasure boat as described in the **Yukti Kalpataru** of king Bhoja<sup>45</sup>. The panel as supposed to have been taken from Konarak is datable to 13<sup>th</sup> century A.D. The depiction of a giraffe, purely an African animal in the sculpture of the sun Temple, Konarak evidently proves that Kalinga had overseas commercial link with Africa. Its depiction in the temple suggests that in those days either many people of Kalinga would have gone Africa and seen the giraffe or one giraffe must have been brought to Orissa by some merchants enabling many to see it.

There is also a magnificent representation of a boat in chlorite stone on the Bhogamandapa of Lord Jagannath temple at Puri. The represented scene is of the **Naga Keli Utsava** (rowing festival) of Lord Jagannath. From the analysis of this depicted boat it can be presumed that the king and his attendants are shown preparing for rowing festival<sup>46</sup>. The middle portion of the boat is having a cabin and in its entrance, representation of attendants on either side can be marked. Four women are shown seated with their oars. In the rear end two ladies are depicted. Between the two, one is standing with a **chhatra** (parasol) and the other is shown holding something in her hand, probably associating with a sort of worship to be performed before the rowing festival begins. The boat represented here is also of **Madhyamandira** type.

Besides, boats are also depicted in some other architectures of Orissa. At Deokund in the Mayurbhanj district of Orissa, goddess Ambika is shown seated over the boat, which is significant because of Ambika's accociation with the boat<sup>47</sup>.

A close study of the art of the Khandagiri-Udayagiri caves reveals the use of west Asian decorative elements such as honey suckle, acanthus, stepped melons and winged animals, etc<sup>48</sup>. Some of the pilasters facing the doorways of the caves of Anantagumpha have also **Ghata** bases ornamented in the Hellenistic faction, very similar in treatment to vessels found from excavation in western India. The huge Bell capital from Bhubaneswar imitated from Asokan columns also shows west Asian motifs in its ornamentation<sup>49</sup>. The boat and ships are also shown in paintings on illustrated palm leaf manuscripts preserved in the State Museum at Bhubaneswar. What is important in the depiction of these sculputres is that the design of those Orissan monuments must have come to the minds of their artists, not out of complete imagination but from the memory of the scenes of the ships of those times, which they might have witnessed in the locality during their life

times. All these works of art provide definite evidences about the unique leadership of Kalinga in the field of shipping, ship-building and maritime activities during ancient times.

Outside Orissa, in the far off countries, especially in the Southeast Asian countries, art pieces, sculptures and monuments also reflect the maritime contact of those countries with Orissa. From an analysis it is gleaned that they are the by product of the Orissan architecture through the overseas contact. In some of the sculptures of the Shwezayan Pagoda at Thaton in Burma, similarities with the Orissa art are found. The dressing and hair style of some of the females are of the Orissan varieties<sup>50</sup>. Some of the bas-reliefs in high technical as well as artistic efficiency show affinity with early medieval sculptures of Orissa<sup>51</sup>. The similarities of a Siva image seated with Parvati of the above Pagoda with Hara-Parvati on the outer wall of Vaital temple of Bhubaneswar is the most striking one. In the Anand temple, constructed during the reign period of Kyanzittha (12<sup>th</sup> century A.D.), the pagan king of Burma, the Orissan influence is evident in the architectural and decorative programmes. The eight monks who had fled from India about the cave temple of Ananta in the Khandagiri hills inspired the builders to build up the Annada temple in imitation of Ananta<sup>52</sup>. The **Sikharas** of the monuments of Prome have remarkable similarities with that of Bhubaneswar temples.

The Buddhist art of Orissa, particularly, the standing Buddha images of Lalitagiri had a profound influence on the stylistic Buddha images of Thailand. I.C. Glover, the excavator of Dan-Ta-Phet site gives credit for such sculptural transactions between Orissa and Thailand as has already been referred to the Buddhist Missionaries. The 12<sup>th</sup> century A.D temple of Wat Mahadhatu of Swankalok shows affinity with the Bhubaneswar temples in detailed treatment<sup>53</sup>. Further, the discovery of an ivory comb from Chansen in the central Thailand suggested that the comb was exported from India, especially from Orissa because Orissa was famous for the transoceanic elephant and ivory tusk export. It is also significant to mention that the **Srivasta** motif of Hathigumpha Inscription of the emperor Kharavela has become later on enormously common in coins of OcEo in Vietnam to Arakon<sup>54</sup>.

There are also some resemblance between Indonesia and Orissa in the domain of art and architecture. Some of the statues of Buddha at Borobudur (Java) show resemblance with the Buddha images of Orissa. The **Dhyani Buddhas** of Borobudur reminds us of massive heads of the Buddha at Ratnagir, one on the slope and another at top of the hills<sup>55</sup>. The stepped tiers of Candi Bima (8<sup>th</sup> CAD) in the Dieng plateau in Central Java resembled the **Sikharas** of Orissa<sup>56</sup>. The holding of a Javanese kris by the door-keeper of the Parasurameswar temple of Bhubaneswar, amply testify to the wide spread interaction between the regions on firm footing.

To sum up we can say that archaeological explorations and excavations along with the discovery of coins, inscriptions and sculptures substantially contributed for the reconstruction of the maritime history of Orissa. It is evident, from the above discussion

that both through direct and indirect ways Orissa had brisk maritime contact with the Mediterranean World on the west and Southeast Asian islands, Sri Lanka, Burma, China etc. in the east. The analysis shows the path for further research on the marine archaeology of Orissa. Though various problems gripped the subject yet certain methods *i.e.* the study of geomorphology, comprehensive archaeological survey and exploration of the sites, extensive excavation works, ethnographic and ethno-historical studies should be followed to find out further knowledge on the Orissan maritime history. The maritime history as gleaned from the archaeological sources, indeed, is of great value and has constituted one of the significant chapters of Orissan history.

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