

## **Abstracts**

**AS GAUR and SUNDARESH**

### **Indo-Arab Trading Stations along the Saurashtra Coast, Gujarat, India: Study based on Underwater Archaeological Explorations.**

Prior to arrival of the Portuguese in the Indian waters in the late 15th century Arabs were dominating power in the Indian Ocean and controlled the maritime trade since the 2nd century AD. A large number of ports existed along the Saurashtra coast during this period and they were frequented by the Arab traders. The important medieval period ports along the Saurashtra coast were Dwarka, Bet Dwarka, Miyani, Porbandar, Jaffrabad, and Ghogha. The underwater investigations at above mentioned sites yielded a number of stone anchors which have been termed as Indo-Arabia type anchors and they are similar to those reported on the east African coast and in the Persian Gulf. The various types of rocks were used in manufacturing these anchors which include basalt, sandstone and limestone. At Ghogha the Indo-Arabia type of anchors have been found in association with the Islamic glazed ware and comparative study with other neighbouring sites indicate that the glazed ware from Ghogha may be dated between the 10th and the 14th century AD. The change in geomorphology due to various reasons and development of new harbours led the disuse of the ancient harbours along this coast.

Gujarat coast punctuated with several seasonal rivers and creeks which provided sheltered harbours and tidal range of the two gulfs namely Gulf of Kachchh and Gulf of Khambhat also facilitated active maritime trade and commerce in the past.

## **ABHIRADA POOK KOMOOT**

### **The Phanom-Surin Shipwreck in Thailand: New Evidence to confirm Trans-Indian Ocean Connections in Late 1st Millennium.**

Previously, the study of the early history of Mainland Southeast Asia in connection with regions in the western Indian Ocean has relied on material culture found on land such as stone ornaments and ceramics, as well as historical accounts. New evidence has recently emerged, however, in the form of a shipwreck The Phanom-Surin (PNS) 9th century CE shipwreck is the oldest ever discovered in Thailand. The PNS displays continuous sewing over wadding throughout the length of plonk seams, the so called sewn-plonk technology. This shipbuilding technique has a very long history and was known to be practiced in the western Indian Ocean until recently. The shipwreck may provide evidence to confirm the voyaging of people from the west to Mainland Southeast Asia and can reinforce the concept of a long-distance trade network with the region, parallel to the coastal and isthmus routes.

The main focus is on a review of archaeological evidence of the late 1st millennium CE found in Thailand, which is linked to other sites in Southeast Asia and the western Indian Ocean region namely, India, Arabia and Persia, alongside the additional information from the PNS site and provide an overview of early interconnections in

broader Indian Ocean World.

## **ALOK TRIPATHI**

### **Crossing the Ocean: Underwater Archeological Excavations on Coastal Sites in India.**

India is most prominently located in the Indian Ocean. The 7,500 km long coastline is dotted with a number of major and minor ports, ancient settlements, archaeological sites and historical monuments. With a rich and over 5 millennium old known maritime history, her 2.2 million sq. km. water area is a rich repository of underwater cultural heritage.

Underwater archaeological studies in India started with geophysical survey for finding the remains of an ancient city off Tamil Nadu coast. Project "Marine Archaeological Studies in Indian waters" generated huge popularity for the discipline. Though it took quite long for establishing this branch but the investigations conducted on coastal sites achieved recognition world over.

Long coastline, rich maritime history and vast water area but limited personnel and resources, make the task for underwater archaeologists challenging. The Underwater Archaeology Wing of the Archaeological Survey of India dealt with it effectively by active collaboration with institutions having well trained workforce, equipment and other resources. This inter-departmental approach proved effective in conducting systematic underwater excavations in the Arabian Sea as well as in the Bay of Bengal. Investigations conducted for about 35 years have established the maritime archaeology firmly in India.

## **BENNY KURIAKOSE**

### **Maritime Museum and its Relevance; A Case Study of Muziris Heritage Project.**

History, conservation and heritage can be linked with development and they can form potential resources and assets for promoting non-formal education and tourism. The focus should be on the local economy generating local employment, promoting traditional industries, art and craft activities. Tourism and heritage management are integrated in this approach. Economic value of heritage, which is sustainable, is important for the state of Kerala.

Ancient Kerala, renowned as the spice coast of India, was a major hub in the spice route trade, between South East Asia, Africa, Arab States and even Europe. At the centre of this spice trade was for centuries the ancient port of Muziris that has a history of 3000 years.

In, 2009, the Government of Kerala initiated the ambitious heritage project encompassing an area of 150 sq. km., which have various monuments and historic buildings today. The project is seen primarily as a conservation project. There is a major thrust on non-formal education and it is being seen as a model for sustainable tourism where the local community benefits. The project is influenced by the tourism considerations, but managed by the principles and conventions of the international guidelines on cultural heritage management. There is a strong academic and research component to the project and convergence of funds from different departments.

## **BISWANATH SARKAR**

### **Dispersion of Population across the Indian Ocean Region: The Genomic Evidences.**

Recent developments in molecular anthropology have widened the scope of understanding extensive patterns of human diversity at the genomic level. DNA analysis, in particular maternally inherited mitochondrial DNA (mt DNA) and paternally inherited Y-chromosome (Y-SNPs) lineages, are now routinely used to trace ancient human migration routes and to obtain absolute dates for genetic prehistory. This could serve in obtaining more clarity about the origin and dispersion of population from different regional areas across the globe. A few genetic studies have recently been conducted among human groups across the Indian Ocean region in order to better reconstruct the settlement history.

The aim is to give an overview in exploring the pattern of human genetic variation of the shared oceanic region of the Indian and Pacific Oceans, as revealed from the recent genomic evidences. Analyses of Asian-specific Y-chromosome lineage (02a1-M95) - the dominant paternal lineage in Austro-Asiatic speaking populations are found on both side of the Bay of Bengal. The study also provides a strong support for the Austronesian settlement of Madagascar, reconciling cultural, linguistic, and genetic data. The exact maritime route(s) of migration from Borneo to Madagascar are still an open question. However, contributions from archaeological, linguistic, cultural, apart from boat technology, genomic studies will provide an unique opportunity to show case the migration history and peopling of Indian Ocean region and its enormous diversity.

## **DILIP DONDE**

### **Maritime Mobility - A Sailor's Perspective.**

It is a well accepted fact that a large number of mass migrations in the Asia Pacific region happened by sea. While the subject has been studied in depth by academics, very rarely has a sailor's perspective been sought to validate the type of ships, geographical factors and likely methods that would have been used. The aim is to give an overview of the difference in techniques and technologies of modern day sailing vis a vis what was available a couple of centuries back while also highlighting the factors that have remained unchanged. Based on personal experience of ocean sailing, examples of the likely routes and methods that could have been used for the mass migrations as well as the way ahead to validate the theories is

quoted.

## **FAISAL REHMAN**

### **The Hadrami Diaspora and Local Cosmopolitanisms in the Indian Ocean Region.**

Over the past six centuries or more, vast numbers of Hadramis of Yemen settled across the Indian Ocean in coastal port towns from Africa to the Malaccas. As they became native to these places of settlement, as well as members of the larger Hadrami society across the ocean, the dispersed understand themselves to be linked by kinship, mobility and integration into new cultural landscapes. Rather than atrophy, these bonds endure, as long as communities and people continue to speak, sing, recite, read, write, narrate, and otherwise represent them.

Unlike the Europeans, the Hadramis and other Indian Oceanic diaspora, like the Gujaratis, Bohras, Chettiars, Buginese, and Malays did not have a mobile, armed, trading empire to back them. Rather than elbowing their way in, they comported themselves to local arrangements wherever they went. They settled in towns big and small and entered into relations with locals that were intimate, sticky, and prolonged. The Hadramis were drawn into dealings with the Europeans, arriving before the Portuguese and remaining after the British departure five centuries later.

## **FRANCOISE VERGES**

### **A Museum of Indian Ocean Worlds for the 21St Century.**

What does it mean to build a museum - a European invention - in the 21st century with everything we have learned from Visual, Feminist, Postcolonial, Subaltern and Museum Studies? The objective of the museum was to narrate visually the history of a population in a French colony, which had been brought from Madagascar, Africa, India, Comoros Islands, Malaysia and China under the rule of European settlers. We had to answer the following questions: What temporalities? What spaces? What kind of objects? What would be the place of oral cultures, of languages, of gender, of class? We finally suggested a museum without objects, where the object would not be at the heart of the narrative, and the temporality and spatiality of movements (of people, songs, languages, objects, sounds, religions ...) in the Indian Ocean.

## **HARIPRIYA RANGAN**

## **Baobabs in India: African Maritime Connections and Diasporic Traditions in the Indian Subcontinent.**

The African baobab (*Adansonia digitata* L.) has a longstanding presence in the Indian subcontinent and many old trees on the west coast of India stand as magnificent living reminders of these ancient maritime connections with the African continent. Little is known, however, about the Africans that brought these plants across the Indian Ocean. The work draws on interdisciplinary research combining genetic, historical, linguistic, and cultural analysis to show how the baobabs in India can reveal the maritime connections between different regions of Africa and India and the cultural traditions of the African diaspora in the subcontinent.

**BEAU JAMES**

### **Australian Indigenous Maritime Engagement with the Oceanic Region.**

When people think of Australia they picture a large, dry and isolated continent. Yet the First Australians have been deeply connected to seas and rivers, and to other Oceanic island peoples since time immemorial. The paper provide an overview of the First Nations peoples of Australia, the oldest continuous living culture in the world and some of the first seafarers with over 60,000 years of knowledge in traversing the waterways of Australia and the Pacific region. It will focus on trade routes, navigation, traditional watercraft and their variances around Australia from seafaring vessels to ocean going craft, fishing techniques, sustainability practices and the intrinsic spiritual and cultural connections Aboriginal and Torres Strait Islander people have had with the ocean and seas for millennia.

**JUN KIMURA**

### **Archaeological Study of Asian Seacraft with a Focus on Maritime Connections and Technological Interaction**

Archaeological finds of ship remains in the Asian regions have been increasing over the last few decades. The Indian Ocean's oldest known vessel, the Godawaya Shipwreck, was found in Sri Lanka. The 7th or 8th century Persian shipwreck was excavated at the estuarine area of Thailand's Chao Phraya River, and Chinese merchant ships from the 12th and 13th centuries have been discovered in the East China Sea. Additionally, the 15th and 16th century Gulf Traders were excavated in Southeast Asian waters. Ongoing study of these shipwrecks helps us to understand the long distance maritime connections that have developed over centuries by oceangoing ships such as these. Detailed examination of the hull remains has revealed the distinctive shipbuilding techniques developed in each region; comparing the ship building technologies between regions focuses on a greater trans-regional aspect. Studying these ships can identify the evidence of technological hybridization between

Asian regions. Thus, a chronological and spatial linkage of these shipbuilding traditions is addressed in an attempt to broaden the significance, correlation, and understanding of the vessels discovered so far.

## **KEVIN SUMPTION**

### **The Australian National Maritime Museum Shaped by the Sea.**

From the Torres Strait in the north to the Cocos Islands in the west and Antarctica in the south, the Australian marine estate straddles three enormous ocean bodies: the Indian, Southern and Pacific oceans. In recent times, Australians have become acutely aware of the critical interplay of our landmass and these oceans to control our weather, and the devastating impact of droughts and floods on our fragile landscape and agriculture.

As the awareness of the economic and environmental importance of our oceans has grown, the Australian National Maritime Museum has been refocusing both its collection and exhibition priorities. Guided by a new master narrative - Shaped by the Sea - conceptual work has commenced on a set of new permanent galleries that explain how the oceans have historically shaped Australia's coast, weather, culture, biodiversity and economy.

Artists, explorers, sailors, traders and even tourists have for centuries acted as informal cultural diplomats, with many using the collections amassed on their travels to establish some of the first museums in the late 18th and early 19th centuries. Today, the Australian National Maritime Museum has embraced an array of new storylines that are leading to major new galleries, facilities and initiatives. The results in coming years will see the "traditional" set of maritime museum stories and outreach functions of the maritime museum, challenged and in some cases rejected.

## **LIPI GHOSH**

### **Bengal & South East Asia: Maritime Trade Routes Envisioned through Literary Evidences and Travel Accounts.**

Bengal (erstwhile the country of Vanga) in ancient times also incorporated the coastal regions of Bangladesh. There are enough evidences suggesting the maritime trade relations of Vanga with parts of Southeast Asia. Early indigenous texts and accounts of foreigners furnish us with information regarding mutual accessibility of the different regional divisions of ancient Bengal. Geographical position of the land belonging to the state of West Bengal and the country of Bangladesh, easy access of rivers carrying enormous volume of water and leading to Bay of Bengal, and innumerable estuaries in the coastal areas *were* conducive to the growth of maritime activities. The principal centre from which maritime enterprises were taken immediately before and after the commencement of the Christian era, was Tamralipti.

There is ample evidence to prove the existence of a sea-route between Tamralipti and Malay peninsula in general. Bengal entered the field of foreign trade long before the commencement of Christian era and it played a prominent role in the seaborne trade and cultural expansion of India towards Sri Lanka and countries of Southeast Asia. The Mahakarmavibhanga while highlighting the severity of calamities attendant upon sea-voyage, narrates the experiences of merchants on voyage from Tamralipti to Suvarnabhumi. The contacts between Tamralipti and Southeast Asia have been suggested by many Chinese texts. The trading routes linking Bengal, inland and coastal Southeast Asia and Yunnan too were recorded by Chinese travelers.

By the seventh century AD, the south-eastern corner of Bengal was emerging as an area of greater importance. It was then included within the region of Samatata & Harikela. There are ample evidences to show that Samatata & Harikela had distinct trade contacts with Thailand, Burma, Cambodia, parts of Vietnam & island of Java. In fact Bengal was situated in a transition zone between Southwest and Southeast Asia. Enjoying this situation Bengal commanded trade with Southeast Asia from the beginning of Christian era both by land and sea.

## **LALATENDU MOHAPATRA**

### **Maritime Tradition of Odisha: Folklores, Rituals, Literatures and Heritages.**

The maritime past of Odisha is evidenced in documentary sources in archives, numerous folklores, oral traditions, rituals, festivals, old literatures and archaeological remnants. Because of his dominance in eastern sea, Kalidasa in Raghubansha refers to the king of Kalinga as mahodadhipati (Lord of Sea) and the eastern sea as Kalinga Sagar which the Europeans later on called Bay of Bengal. Many rituals are still practiced in families from coastal Odisha, indicative of the regular annual sea voyage. The legend of Karubaki, the daughter of a fisherman of Kalinga attached to Ashoka's conquest of Kalinga speaks of an alliance sought by the emperor to take control over the maritime prowess of Kalinga. Similarly the legends and Buddhist literatures of Bali and Ceylon credit the people of Kalinga in shaping and evolving the cultures of these countries. These propositions are supplemented by numerous archaeological excavations, where coins, knobbed wares and potteries confirm Kalinga's contact with Roman world and China. The commonality in culture, rituals, artefacts, languages and festivals between Boli, Thailand and Odisha is also an indication of their oceanic contact.

The nautical knowledge which the sailors used has also survived in many literatures. Many boats used and manufactured by the fishermen community now are also mentioned in old literatures. These literatures throw light on both rabetting and caulking methods in boat construction. Thus these collections of facts from legends, folklores, literatures, fairs, heritage sites and artifacts relating to sea voyages and matters connected thereto, provide good opportunity to the ethno historians to share their ideas on the larger perspective of the maritime world.



## **NIDHI MAHAJAN**

### **Seasons at Sea and at Home: The Sailing Vessel Trade from Aakhar to Mausam.**

Historians have argued that the seasonal monsoon winds enabled the predictable movement of sailing vessels or dhows across the Indian Ocean, giving rise to precocious forms of transregional exchange and trade. The aim is to examine the forms of exchange, and attendant circulations of money and capital enabled by the seasonal movement of modern dhows from the Gulf of Kutch across the Western Indian Ocean. Today, dhows transport a plethora of goods between South Asia, the Middle East and East Africa, ranging from foodstuffs, electronics, livestock and even cars. Going where container ships cannot or will not go, these dhows now function as an economy of arbitrage, quickly adapting to market trends. Yet, the dhow trade which is no longer dependent on the monsoon, continues to be structured by older seasonal monsoonal patterns. How does this seasonality influence markets that dhows serve? What forms of economic exchange and social interaction are made possible at home, and at sea through such seasonal movement? How then is seasonality and time experienced amongst contemporary dhow crews? What impact does this seasonality have on kinship and labour relations? For dhow crews, labour is intimately tied to kin relations and so seasonality structures not just seemingly economic matters, but also social life. Ultimately, seasonality undergirds movements of money, capital, and kinship and labour relations for small-scale capitalists across the Indian Ocean suggesting that exchange across the region is intimately tied not just to the vagaries of markets, but also to geography and historical patterns of exchange

## **RANABIR CHAKRAVARTI**

### **The Red Sea Network, Aden and the Western Seaboard of India: Gleanings from the Letters of Jewish 'India Traders' (11th to 13th Centuries CE).**

The first half of the second millennium witnessed a lively and brisk maritime network across the vast expanse of the Indian Ocean ('al bahral Hind' in Arabic texts on travel and geography) which covers about 20% of the total maritime space of this planet. As K.N. Chaudhuri pointed out, 'segmented voyages' and 'emporium trade' contributed to the burgeoning maritime network in the Indian Ocean region whereof four major polities (the Fatimid Caliphate, the Cholas, Srivijaya and the Song dynasty of China) showed keen interests in maritime trade. While textual, field archaeological (especially evidence of ship-wrecks and ceramic evidence), numismatic and epigraphic data have been regularly furnished to understand the maritime scenario of the Indian Ocean, the voice of the participating maritime merchants (including ship-owners) is captured by 459 business letters of Jewish merchants, recovered from the Cairo Geniza. These merchants usually hailed from Masr/Misir (Egypt) and further west (al Mahdiyya) and often tried to reach the west coast of India, particularly the Malabar coast. These traveling Jewish merchants were labeled by S.D. Goitein as 'India traders' (musafirun al Hind), who



mainly operated in the Red Sea network with the western sea-board of India; one of their major hubs was Aden. These business letters offer unique images of the world of maritime merchants from the Jewish, Islamic and Indic origins. The work highlight the exchange of commodities and information, shipping networks and interactions, cooperation, rivalry and negotiations among diverse types of merchants, cutting across geographical, religious and ethnic orientations.

## **PIERRE YVES MANGUIN**

### **The Western Routes: Ships and Shippers from the Austronesian World across the Indian Ocean.**

Austronesian speaking people, as is well known, have peopled most of Oceania, all the way to Easter Island. They also sailed across the Indian Ocean to Madagascar and have largely contributed, in linguistic, ethnographic and genetic terms, to the peopling of the island. However, the timing, the maritime routes or even the motivations of this western extension of the Austronesian World remain very much a matter of debate. One major difference with their expansion into the Pacific is that such western sailing ventures continued during the first and second millennia CE, and were then sponsored by the sophisticated states of the western facade of Southeast Asia. However, in between the eastern shores of the Indian Ocean, and Madagascar, on its western shores, no other people speak Austronesian languages. A variety of signs nevertheless bear testimony to the long-term presence of these eastern navigators along the coasts of South Asia and in oceanic islands.

## **SAMUEL BERTHET**

### **Shipbuilding and Etymology in the Indian and Pacific Oceans realms.**

To study of shipbuilding in Chittagong, one has to look at the maritime interactions sustained by the port town on the edge of the Ganga Brahmaputra-Meghna delta. Not only was the port city part of the larger Indian Ocean emporia economy, but it also had robust interactions with the western edges of the Pacific Ocean.

Pyrard de Laval wrote about his visit to Chittagongin 1607: "The country is healthy and temperate, and so wondrous fertile that one lives there for almost nothing; and there is such a quantity of rice, that, besides supplying the whole country, it is exported to all parts of India, as well to Coe and Malabar, as to Sumatra, the Moluccas, and all the islands of Sunda, to all of which lands Bengal is a very nursing mother, who supplies them with their entire subsistence and food."

Such degree of interaction via shipping inevitably entails transfer of shipbuilding and technology. Hence to study the maritime history of Chittagong, one has to see the

possible shipbuilding connections between the Northern Bay of Bengal and the Indian Ocean, the aim is to examine the etymological debates related to ship naming in the Indian Ocean and their connection to the Pacific Ocean. The etymological debate itself those those possible connections between these two oceans.

## **V SELVA KUMAR**

### **The Ancient Port of Arikamedu and its Maritime Connections.**

The ancient port of Arikamedu is the early historic port town on the Coromandal Coast of India which has seen systematic investigations from the 1940s. This site has received phenomenal attention, since it remained as the only site to have produced a large volume of non-Indian (Roman and Indian Ocean) ceramic materials till the late twentieth century.

Recent research has revealed that Arikamedu was just one site among the numerous settlements and ports of the Early Historic coastal regions of India, which are very graphically described in the ancient texts. The sites such as Pattanam in Kerala and Alagankulam in Tamil

Nadu have produced voluminous materials and more such evidence is likely to come from many of the sites along the coast.

The excavations by Mortimer Wheeler, Casal and Vimala Begley have revealed copious data for the maritime activities at this site, besides the materials for industrial production.

Evidence of Terra Sigillata, Roman Amphora, short inscriptions in Tamil Brahmi and Brahmi scripts and industrial activities and brick architecture has been found. Pre-Early Historic megalithic evidence

has also been found at this site. There are excavations reports published by Wheeler, Casal and Vimala Begley describing the various material culture and their contexts. There is ample scope to look at the spatial and temporal distribution of the artifacts, industrial activities from a fresh perspective, which forms the theme of this paper.

## **SHAINA SEHGAL**

### **Contingency and Conjuncture in the Emergence of Trade in the Nicobar Islands**

Early seafaring trade was the springboard for social, economic and cultural interaction among the islands in Southeast Asia. The emergence of trade in natural resources has been studied through several approaches, and taken together they form a powerful explanation. Using the case of the Nicobar Islands the attempt is to explain the emergence of trade through the interplay of social, political and ecological factors at multiple scales, from the island to global level. Trade documented in the Nicobar Islands circa 17th century AD indicate that it was largely opportunistic, as the islands lay on a prominent sea route from West Asia to South-East Asia with coastlines favourable to navigation under both Northeast and Southwest

monsoon winds. In addition, the Nicobars contained safe natural harbours and anchorages, food, freshwater and a coastal-dwelling indigenous community keen on bartering Nicobar's forest, plantation and marine ecological produce with metal implements and European commodities that were impossible to produce with the island's ecological resources alone. This could explain sporadic mentions of the Nicobar archipelago throughout written history from the 2nd to 17th century.

However, the islands gained prominence with documentation in sailing directories and almanacs and the increasing importance of neighbouring ports, in the backdrop of geopolitical tussles among several European Trading Companies in the Southeast Asia.

## **SUSHMITA BASU MAJUMDAR**

### **Money and the Indian Ocean**

The purpose is to look at the use of money in the Indian Ocean and in a broader context also the Bay of Bengal Interaction Sphere. It is very interesting to note that sometimes coins in circulation were demonetized and brought from other countries to India but eventually in the process they gain a currency and start a fresh journey of circulation much away from their past circulation process and in a different context altogether. Here we would also explore alternative currency like hundis, cowrie shells and so on. Peninsular South will remain the main focus of the paper. In this context the role played by the Bay of Bengal Interaction sphere is quite different and this paper also focuses on how the local currency is influenced by the non-local coinages. the evolution of coinage in Sri Lanka and the impact of the coins of the subcontinent in this process of evolution is also taken care of. Maldives and Lakshadweep islands also remain in focus and cover the broad canvas.

## **SWARUP BHATTACHARYYA**

### **Bengal Maritime Technology: With Special Reference to Watercraft.**

Riverine country depends on river. Transport, trade, fishing are the means of livelihood for millions of people in Bengal. Man makes his humble watercraft since time immemorial. Boat makers with their special skill and knowledge have been creating watercrafts for centuries.

Reverse clinker, clinker, carvel, stapled, rabbetted, smooth skinned, shell built, frame first ... are the technical variety which are still visible in the boat architecture of Bengal.

Bengal maritime landscape gives birth to enormous variety of typological boats both for river as well as for open sea. Nature of water bodies starting from foothills of Himalaya to the wide stretch

of river mouth of the river Ganga nurtured huge number of watercrafts from very simple dugout to complicated reverse clinker boat, from small spoon shaped Dingi to large Trawler. Demographic profile of Bengal also suggests different cultures. Bengal was also the centre of eastern India wherefrom interaction took place with other parts of the world through boat and

ship. Acculturation gives birth to adopt other technology also. Oral traditions and cultural traits in maritime culture are still in vogue in Bengal.