

Man and Environment

ABSTRACTS

Volume XLI, No. 1 (January-July 2016)

1. Vedic Culture: Epic and Pauranic Phase and Further. Based only on Iconography

G.B. Deglurkar

No abstract

G.B. Deglurkar, *Man and Environment* XLI (1): 1-4 [2016]
ME-2016-1A01

2. Malaria and the Harappan Civilisation

Robert Arnott and Eva Dumann

Of the many diseases that would have affected the Harappan Civilisation through all its phases, among the most serious is thought to be malaria, credited with having a major social and environmental effect on any society it infects. According to our knowledge of the ecology and demography of the Harappan Civilisation, it would have offered ideal conditions for malaria, particularly falciparum malaria, to achieve both prevalence and virulence. With malaria being first introduced into the Indus Region in approximately 4000 B.C., leads us to question its effect on the Harappans and poses the question whether it inhibited the civilisation's growth, particularly in the period that ended with the transition to the Mature Harappan Phase. It is conclusive that in the Pre-Harappan Phase, when environmental factors were conducive to the spread of both the vector and the disease, its depressive effects meant that the expansion that occurred in the Mature Harappan Phase might have happened earlier. By the time the Mature Harappan Phase evolved, because of ecological and geographical changes and human intervention like improvements in farming techniques, malaria would have been reduced to a manageable level. Malaria, however, may have inhibited the growth of the Chalcolithic cultures peripheral to the Harappans that were, unlike them, prevented from emerging from an earlier stage of development. This article examines how malaria has been identified in the archaeological record, its method of transmission to the Harappan heartlands and its clinical and social impact on the Harappan population.

R. Arnott and E. Dumann, *Man and Environment* XLI(1): 5-16 [2016].
ME-2016-1A02

3. Lesser-Known Buddhist Monasteries: Tiladhaka and Yaśovermapura

Bijoy Kumar Choudhary

This article seeks to reconstruct the history of lesser-known Buddhist monasteries in the region of Magadha on the basis of archaeological evidence. Several smaller monasteries are mentioned in the Pāli literature and in the accounts of Chinese travellers, but no serious attempt has been made to trace their history. This exercise is needed not only to fully unravel the rich Buddhist heritage, but also to understand the dynamics of mega-monasteries such as Nālandā Mahāvihāra. The current work mainly focuses on two smaller monasteries, namely, Tiladhaka and Yaśovermapura, but the evidence from other neighbouring monasteries has been used to illustrate the relevant issues. There is a rich corpus of data available at the sites related to these monasteries in form of sculptures, inscriptions, coins, structural remains, and potsherds. With the help of this data, the article addresses several questions such as the possible dating of these monasteries, their architecture, resource base, patronage, the kind of engagement they had with different contemporary religious forms, and their relationship with Nālandā Mahāvihāra.

B.K. Choudhary, *Man and Environment* XLI(1): 17-28 [2016].
ME-2016-1A03

4. **A Study of the Ancient Iron Workings in the eastern fringes of the Chhotanagpur Plateau, West Bengal**

Dipsikha Acharya

The present paper attempts to elucidate the nature of iron working activities as practised in the eastern fringes of the Chhotanagpur Plateau particularly in the western-south western parts of modern West Bengal, on the basis of the published excavated data. In addition, preindustrial iron working traditions remembered by the modern descendants of the skilled iron workers such as the Asura-Birjhia people has been documented.

D. Acharya, *Man and Environment* XLI(1): 29-43 [2016].
ME-2016-1A04

5. **Stone Jar Burials in North Cachar District, Assam**

Tilok Thakuria, Tiatoshi Jamir and Milan Kumar Chauley

This paper is based on the recent archaeological exploration carried out in North Cachar District of Assam. The exploration aimed to locate areas with stone jars along with habitation deposits. It was possible to find five such localities along with the evidence of habitation deposits; dolmens and menhirs too. The stone jars, built as ancestral bone repositories, are seen in Southeast Asia. The evidence for such jars in India is found only in North Cachar District of Assam. The present paper discusses morphology and function of these jars, origin, ethnographic parallels, and explores possibilities of the authors of the jars as being the Mon-Khmer speaking people.

T. Thakuria *et al.*, *Man and Environment* XLI(1): 44-51 [2016].
ME-2016-1A05

6. **Archaeological Reconnaissance in Garbhanga Reserve Forest, Assam**

Manjil Hazarika

This paper is the result of explorations carried out at the Garbhanga Forest in Assam. The survey has resulted in the discovery of a stratified archaeological deposit with pottery, iron and stone objects, faunal remains and megaliths at a locality known as Bargaon. Besides, there are other localities with megalithic remains and stone tools. For interpreting the archaeological record, ethnographic data among the resident Karbis was collected in order to draw 'direct historical analogies'.

M. Hazarika, *Man and Environment* XLI(1): 52-63 [2016].
ME-2016-1A06

7. **Recent Archaeological Investigations in Mid-Tel River Valley, Odisha**

Nalinikanta Rana

This paper is based on recent archaeological investigations in the mid-Tel river Valley, Odisha. It describes the location of 50 discovered sites and the associated finds. The artefacts found at these sites range from the Palaeolithic tools to the Early Historic ceramics and other material.

N. Rana, *Man and Environment* XLI(1): 64-74 [2016].
ME-2016-1A07

8. **Exploration of a Shipwreck off the coast of Konark, Odisha**

Sila Tripathi, Sabir Bux and Rudra Prasad Behera

Archaeological findings suggest that ports of Odisha were well connected with other ports of the Indian subcontinent and Persian Gulf, Red Sea and Southeast Asian countries. In the course of maritime trade, many vessels get wrecked due to various causes, but information on shipwrecks was available only from the 16th century onwards in the archives and libraries of India and overseas. CSIR-National Institute of Oceanography, Goa, has undertaken shipwreck studies in Indian waters since 1988-89. In the recent past preliminary explorations of shipwrecks were carried out off the coast of Odisha. This paper deals with the results of the preliminary exploration of a shipwreck off the coast of Konark.

Sila Tripathi *et al.*, *Man and Environment* XLI(1): 75-81 [2016].
ME-2016-1A08

9. **A Maritime Archaeological Exploration along the Narmada Estuary, West Coast of India**

A.S. Gaur and Sundaresh

A coastal exploration along the estuary of the River Narmada yielded the evidence of a port in Bharuch. Several early historic sites are noted along the down-stream of the River Narmada. Interestingly, there is a temple dedicated to Shikotara Mata near Dahej where navigators and fishermen worship. To the south of Narmada a protohistoric site, Bhagatra (also called Bhagatrav), situated on a small creek known as Kim, was investigated in detail. The paper discusses the findings of the maritime archaeological investigations conducted (2013) along the lower Narmada region.

A.S. Gaur and Sundaresh, *Man and Environment* XLI(1): 82-87 [2016].
ME-2016-1A09

10. **Absolute Chronology of the Quaternary Period from the Deccan Trap Region, Maharashtra**

Shreyas Jagtap and Sushama G. Deo

The absolute chronology of archaeological and non-archaeological sites (locations devoid of cultural material) from the Deccan Trap region, Maharashtra, have been compiled in a systematic way. Out of 264 absolute dates compiled in this paper, majority are ¹⁴C dates. A few dates are obtained by Potassium Argon (K-Ar), Argon-Argon (Ar-Ar), Uranium Thorium (U-Th) and palaeomagnetic methods. The data demonstrates that the Deccan Trap region was occupied by early humans since Early Pleistocene period.

S. Jagtap and S.G. Deo, *Man and Environment* XLI(1): 88-113 [2016].
ME-2016-1A10

11. **A Note on the Recently Discovered Early Historic site at Pandhrewadi (Bavdhan), near Wai, Satara District, Maharashtra**

Jayendra Joglekar and Shantanu Vaidya

No abstract

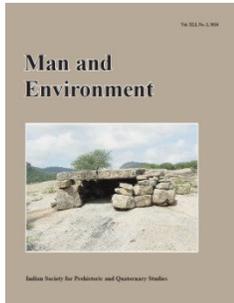
J. Joglekar and S. Vaidya, *Man and Environment* XLI(1): 119-122 [2016].
ME-2016-1N01

12. **A Note on Inscribed Jewellery Hoard from Tenur, Madurai District, Tamil Nadu**

K. Amarnath Ramakrishna, M. Rajesh and N. Veeraraghavan

A jewellery hoard consisting of gold bars, beads and a pendant was found accidentally in the northern part of Tenur village in 2009. The jewellery altogether was kept in a small Red ware pot. Subsequent to its preliminary examination, the Archaeological Survey of India carried out systematic investigation of archaeological sites in Vaigai River Valley that includes Tenur during 2013-2014. This note provides observations made during this survey and discusses historical importance of the jewellery hoard.

Ramakrishna *et al.*, *Man and Environment* XLI(1): 119-122 [2016].
ME-2016-1N02



Volume XLI, No. 2 (July- December 2016)

1. **Quaternary Fauna from the Kapileshwar Locality in Purna Alluvial Basin, Maharashtra**

G.L. Badam, M.P. Tiwari, N.G. Thakur, A.P. Bejalwar, P.D. Sabale, S.P. Khadse and Abhay M. Varade

The comparatively lesser known Purna Basin of Central India has, in recent years, brought to light extensive faunal data of the Quaternary period thus highlighting important chronological data (Youngest Toba Tephra, paleomagnetism and Ar-Ar dating) that pertains to the problems of correlation of its geological units with those of the other Central Indian basins. The four formal stratigraphic formations in the valley (the Purna, the Kural, the Kodori and the Vaghoi) have been thoroughly studied and dated in relation to the tephra marker horizons in the Kodori and Kural Formations.

The valley has yielded, what could be, one of the richest Quaternary animal habitats in Central India. Mammalian fossils belonging to *Equus namadicus*, *Equus* sp., *Bos namadicus*, reptilian fossils belonging to *Trionyx gangeticus* and invertebrates belonging to molluscan shells (*Lamellibranchs*) have, so far, been identified in the present survey. These findings throw important light on the migration and distribution pattern of the animals in the past and their palaeoenvironmental implications.

The taphonomic processes in the valley were predominantly controlled by natural factors and are devoid of human interference. The available faunal material has preserved evidences of erosion, abrasion and breakages. Skeletal response to riverine situations, features of fossil assemblages on the main channel and those from the abandoned palaeochannels, have thrown enough light on the taphonomy and palaeoecology of the valley.

Badam *et al.*, *Man and Environment* XLI (2): 1-17 [2016]
ME-2016-2A01

2. **New light on Acheulian Artefacts made on Basalt: A Case Study of Urmodi River Assemblage**

Jayendra Joglekar

After the discovery of the Acheulian site at Atit on Urmodi River (2015), it was decided to carry out further explorations in the Urmodi river basin. During these explorations, Acheulian artefacts

were reported from 6 sites (8 localities), across different geomorphic contexts. The results of the explorations are presented in this paper. Earlier research on Acheulian culture in Deccan Trap region of peninsular India yielded few important Acheulian sites like Gangapur, Chirki, Nevasa, Morgaon, and Bori. Although there was hardly any substantial evidence of Acheulian presence, an exception was the site of Yedurwadi, in the upper Krishna basin. One of the reasons for this could be difficulty in identifying the artefacts made on basalt. The problem has been addressed in this paper using a new method for identification of flakes. The results of this method if tested elsewhere, where basalt has been used as raw material, could lead to a better understanding of artefacts made on basalt. Also characteristic features observed on basalt flakes are shown through photographs. The paper also addresses the problem of cleaver flakes and raises few questions as well. Attempt has been made to look into the cognitive behavior of the Acheulian hominin in this region.

Jayendra Joglekar, *Man and Environment* XLI (2): 18-31 [2016]
ME-2016-2A02

3. **Phytolith Analysis and the Indus Civilisation: A Review**

Jennifer Bates and Cameron A. Petrie

This paper presents a review of the application of phytolith analysis to the archaeology of the Indus Civilisation (c. 4000-1300 BCE) of South Asia. Phytoliths are microscopic silica casts of plant cells formed during the life of the plant through the uptake of monosilicic acid from groundwater. The phytolith studies that have thus far been carried out on Indus settlement sites are reviewed, and the range of issues to which phytolith analysis has been applied to Indus archaeology are also outlined here. This paper argues that phytolith analysis holds great potential for gaining alternative views on age-old archaeological questions relating to the Indus Civilisation. It concludes that although understudied at the moment, there is much to be gained by employing phytolith analysis systematically during archaeological studies in this region and time period.

Bates and Petrie, *Man and Environment* XLI (2): 32-49 [2016]
ME-2016-2A03

4. **Archaeology of Vellore Region, Tamil Nadu**

K. Kumar and K. Rajan

Recent explorations conducted in the Vellore region on the banks of the River Palar yielded more than 350 archaeological sites ranging in age from the Lower Palaeolithic to the Early Historic. The field survey offered considerable evidence to understand cultural features of Lower, Middle, Upper Palaeolithic, Microlithic, Neolithic, Iron Age and rock art sites. The discovery of Upper Palaeolithic tools and rock art sites could be considered as one of the significant contributions of the present study. The documentation of a large number of Iron Age sites has contributed to the understanding of the ancient settlement pattern of this region.

K. Kumar and K. Rajan, *Man and Environment* XLI (2): 50-84 [2016]
ME-2016-2A04

<http://www.manandenvironment.org/images/ispqs/pdf/kumar-rajan-table.pdf>

5. **Iron Age-Early Historic Archaeology of the Lower Periyar Valley, Kerala**

C.M. Jaseera

James Babington's excavation of the Chattaparamba megalithic burial in 1819 initiated the study on the megaliths of Kerala. Since then, numerous researches on different aspects of megaliths have been carried out. The available published archaeological-environmental data, exploration undertaken by the author from 2013 to 2015, and personal observations are presented in this paper. Here an attempt has been made to understand the distribution pattern of Megaliths of the Lower Periyar Valley in relation to the landscape. The article also intends to provide an overview of the Iron Age-Early Historic sites of the Lower Periyar Valley.

C.M. Jaseera, *Man and Environment* XLI (2): 85-101 [2016]
ME-2016-2A05

6. **Burials and Settlements of the Early Iron Age in Vidarbha: A Fresh Analysis**

Shantanu Vaidya

The megalithic culture is mostly known by the burial remains. There has always been an impression among research scholars that the megalithic people were pastoral in nature. The main reason for this has been the lack of sufficient evidence of settlement sites. Moreover, the region of Vidarbha has also not yielded many settlement sites. In Vidarbha, however, settlements of the Early Iron Age without burials, as well as sites having both settlements and burials are found. The recent settlement found at Mahurjhari by Mohanty (2015) have opened up new research avenues which have led this author to continue the search for many new settlements, thereby bringing a change in the approach towards the Early Iron Age and its contribution to the development of urbanism in Vidarbha.

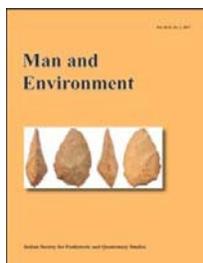
Shantanu Vaidya, *Man and Environment* XLI (2): 102-113 [2016]
ME-2016-2A06

7. **A Note on Fluorine Analysis of Elephant sp. Remains, Kalabarwa Forest Area, District West Champaran, Bihar**

Manoj Kumar, Pushp Lata Singh, Sachin Vidyadhar Joshi

Explorations carried out in the Kalabarwa Forest Area in District West Champaran, North Bihar brought to light important archaeological sites and yielded prehistoric animal fossils. The main focus of this note is to report and provide dates of the elephant fossils recovered from the alluvium soil using the fluorine-phosphate method.

Manoj Kumar *et al.*, *Man and Environment* XLI (2): 114-116 [2016]
ME-2016-2N01



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ABSTRACTS

Volume XLII, No. 1 (January-June 2017)

1. [Revisiting Issues of Transformation in Indian Prehistory](#)
D.K. Bhattacharya

No abstract

D.K. Bhattacharya, *Man and Environment* XLII(1): 1-10 [2017].
ME-2017-1A01

2. [Himalaya Uplift, Climate Change and Landform Evolution during the Quaternary: An Intricate Interplay](#)
R.K. Ganjoo

No abstract

R.K. Ganjoo, *Man and Environment* XLII(1): 11-20 [2017].
ME-2017-1A02

3. [Preliminary Observations: Palaeolithic Investigations at Kibbanahalli, Southern Karnataka](#)
Akash Srinivas

Despite almost a century of research at the Palaeolithic locality of Kibbanahalli, southern Karnataka, the fundamental details such as stratigraphy and lithic assemblage structure require further considerations. This study was undertaken to reinvestigate this site and to further understand the present day distribution pattern of Palaeolithic localities in the region surrounding this site. This paper seeks to employ, on a regional scale, a multidisciplinary approach involving archaeology, geology and geomorphology, to address questions regarding the nature of Palaeolithic sites in the region. Preliminary results have shown that there appears to be an occupation of this region by Palaeolithic populations employing an Acheulian tradition on both flake and natural blanks. The lithic assemblages collected suggest that the locally available raw material was subjected to two parallel reduction sequences, and includes cores, flakes, tools and waste products. A study of the distribution pattern and modern day land-use practices in the region imply a role played by the changing trends of land-use on the observed distribution of the Palaeolithic archaeological record.

Akash Srinivas, *Man and Environment* XLII(1): 21-35 [2017].
ME-2017-1A03

4. [The Impact of Raw Material Properties on Lithic Debitage Assemblage Variation: An Experimental Assessment in Indian Context](#)
Krishnendu Polley, Sujan Chandra, Aparupa Banerjee and Worrel Kumar Bain

Internal properties of lithic raw materials are considered as the major source of variation in debitage assemblage. However, said variation is not understood in the background of Indian archaeology. Moreover, there is an urgent need to understand the impact of tool on stone/raw material on lithic debitage assemblage in a quantitative manner. In the present work, experimentally manufactured debitage assemblage of four different raw materials available in the India subcontinent, namely quartz, quartzite, metadolerite and chert are compared to test the aforesaid assumption. Various attributes of unbroken debitage are compared by the application of ANOVA and Independent Sample Test with the help of t-statistics. Besides petrological analysis was done to understand various internal properties of raw materials which can influence variability of debitage assemblages. Outcome of this work supports the assumption that the raw material difference is one of the prime factors behind the debitage assemblage variation.

K. Polley *et al.*, *Man and Environment* XLII(1): 36-49 [2017].
ME-2017-1A04

5. [Tracing the Antecedent and Chronological Succession of the Harappans Settled in the Sarasvati-Drishadvati Valley](#)
Amarendra Nath

This paper is an inquiry into tracing the antecedent of the Harappans settled in the ancient Sarasvati-Drishadvati Valley in a chronological succession. The available literature lays emphasises on their antecedents rooted in the agricultural communities of the hills bordering the Indus alluvial plain to the west. To what extent the above analogy holds good is a matter of debate as recent field data suggests that there were other promising regions of agricultural communities dispersed in potential eco-zones of the Aravallis, the Siwaliks and in the plains of the Ganga Valley to influence the Harappan urbanism in the Sarasvati-Drishadvati plains. The radiometric dates from successive cultural traditions preceding the incipient urbanism of the Harappans support the hypothesis of regional evolutionary process.

Amarendra Nath, *Man and Environment* XLII(1): 50-79 [2017].
ME-2017-1A05

6. [Microliths from Tala, District Kaimur, Bihar: A Morphological Study](#)
Prabhakar Upadhyay and Kamala Ram Bind

A prehistoric site with evidence of a painted rock shelter located on the banks of the Suara River, a tributary of Karmanasha River, was discovered in February 2010 at Tala, Kaimur District, Bihar. The ecology of the region, evidence of different types of microliths at the factory site and paintings of the rock shelter – suggest that the region was preferred for habitation during prehistoric times. This paper presents a brief report of the findings at Tala.

P. Upadhyay and K.R. Bind, *Man and Environment* XLII(1): 80-89 [2017].
ME-2017-1A06

7. [Preliminary Report on the Excavation \(2014-2015\) at Deltihuda, Odisha](#)
Subrata Kumar Acharya, Laxmi Kanta Mishra, Umakanta Mishra, Soumya Ranjan Sahoo, Veena Mushrif-Tripathy, R.K. Mohanty and P.P. Joglekar

The site Deltihuda at Talagarh village in Cuttack District, Odisha is located 37 km west of Cuttack city. The first season of excavation (2014-2015) revealed ceramic assemblage comprising burnished ware, cord impressed ware, tan ware and antiquities such as adze, celt, and beads. Other important findings include the discovery of skeletal remains of an adult male human and a pot burial of a child. The antiquities and pottery assemblage reveal that Talagarh belonged to Chalcolithic period.

S.K. Acharya *et al.*, *Man and Environment* XLII(1): 90-99 [2017].
ME-2017-1A07

8. [Hatnur, a Chalcolithic Mound from Northern Marathwada, Maharashtra](#)
M.S. Chouhan, Tejas Garge, Shivakant Bajpai, Kishor Chalwadi, Amol Kulkarni, Snehal Kulkarni and Mayuresh Khadake

The Deccan Chalcolithic culture is well-investigated in archaeological studies in India. Large number of sites have been reported from Maharashtra, Karnataka, Madhya Pradesh and Gujarat. The discovery of a Chalcolithic settlement at Hatnur, Aurangabad District, Maharashtra has added to the expanse of the Jorwe culture. The site is located on route connecting Marathwada and Khandesh, two ancient geographic regions of Maharashtra. Explorations indicated that even after decline of the Chalcolithic culture human habitation continued during the Historical and Medieval period at Hathnur.

M.S. Chouhan *et al.*, *Man and Environment* XLII(1): 100-113 [2017].
ME-2017-1A08

9. [A Note on Acheulian Findings near Nagardhan, Nagpur District, Maharashtra](#)
Jayendra Joglekar

This note presents recently discovered Acheulian localities near the site of Nagardhan, Nagpur District, Maharashtra. Though lithic assemblage was limited, it evidences early hominin presence in Vidarbha.

Jayendra Joglekar, *Man and Environment* XLII(1): 114-117 [2017].
ME-2017-1A09



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ABSTRACTS

Volume XLII, No. 2 (July-December 2017)

1. [Newly Discovered Microlithic Sites in the Middle Tawa Basin, District Betul, Madhya Pradesh](#)

Soumi Sengupta, Sushama G. Deo and Arati Deshpande-Mukherjee

River Tawa, a major tributary of the Narmada which has been less attended to thus far, was explored over a period of 5 years (2009-2013). In the present paper, we report on these 14 newly discovered microlithic sites. These findings in the hilly and forested regions of the middle Tawa Basin have highlighted its importance in prehistoric research. In absence of absolute chronology for these microliths, field-based studies indicated that these sites belong to the Late Pleistocene period.

Soumi Sengupta *et al.*, *Man and Environment* XLII(2): 1-10 [2017].
ME-2017-2A01

2. [An Inventory of Raw Materials Utilized for Manufacturing Prehistoric Polished Stone Tools](#)
Paromita Bose

Although a large number of polished stone tools with varied archaeological contexts have been discovered from across India, studies, so far, were mainly restricted to their typological attributes. An important issue, use of the raw material, has however hardly been addressed. There are a limited number of publications that discuss the issue of the utilized raw materials in context of prehistoric polished stone tools with a regional approach. What is lacking is an attempt to gather the data as a whole into a single publication. This paper attempts to create a database of raw materials utilized for the manufacturing of prehistoric polished stone tools in the Indian Subcontinent on the basis of existing published reports of discoveries (both explorations and excavations). The choice of raw materials utilized in different parts of the country for making such tool types has been highlighted.

P. Bose, *Man and Environment* XLII(2): 11-24 [2017].
ME-2017-2A02

3. [Provenance Study of Ancient Potteries from West Bengal and Tamil Nadu: Application of Major Element Oxides and Trace Element Geochemistry](#)
Supriyo Kumar Das, Santanu Ghosh, Kaushik Gangopadhyay, Subhendu Ghosh and Manoshi Hazra

Geochemical study of pottery provides useful information on the source of the raw materials (clay) of ancient vessels. However, published geochemical data on potteries from eastern coastal region of India is limited. Moreover, there are debates on the provenance of certain categories of fine ware, including the 'Rouletted ware', found in eastern coastal India. The uncertainty about the provenance of the potteries is primarily due to the fact that geochemical/geological sources of clay used for manufacturing of potteries has till now

never been taken into account. To address the issue, major element oxides and trace elements in potsherds collected from surface context at three sites situated along the east coast of India namely Chandraketugarh and Tamluk in West Bengal, and Arikamedu in Tamil Nadu have been analysed. Samples from each sherd was prepared as a homogenised powder, and major element oxides and trace elements was analysed using wave length Dispersive X-ray fluorescence spectroscopy (WD-XRF). Further, the study drew on already published major element oxide data of ancient potteries and sediments from Tamil Nadu and the Ganga Plains to identify the source of clay. The result indicates that the potteries were made of clay derived from the weathering of felsic to intermediate rocks, which are abundant in Tamil Nadu and Puducherry, but absent in West Bengal. The uniform geochemical character of the potteries collected from the geographically separated sites further implies that the potteries were manufactured using a single type of clay. It is likely that the potteries were manufactured at or close to the archaeological site in Arikamedu, and exported to the site in lower West Bengal such as Tamluk and Chandraketugarh.

S.K. Das *et al.*, *Man and Environment* XLII(2): 25-34 [2017].
ME-2017-2A03

4. [A Preliminary Report of Exploration of Prehistoric sites in South Koel River Basin, Odisha](#)
Priyanka Mandal

Exploration in the South Koel River Basin (Sundargarh District, Odisha) revealed five microlithic open air sites located at the foothills. Artefact collection mainly comprised of blades, lunates, notches, hinged flakes, blade cores and scrapper.

Priyanka Mandal, *Man and Environment* XLII(2): 35-41 [2017].
ME-2017-2A04

5. [Early Historic Buddhist Settlements in Eastern India: A Study of Radhanagar-Kayama-Langudi Culture Complex](#)
Sunil Kumar Patnaik

The recent archaeological explorations and excavations in the Brahmani Valley have brought to light several new Buddhist sites ranging from Early Historic to Late Medieval periods. Three Early Historic sites discussed in this paper throw light on the growth and development of early Buddhist settlements, art and architecture and trade mechanism in this region. The excavated finds from Radhanagar and monumental remains of other two sites of this culture complex demonstrate that the Buddhist settlements in Eastern India, particularly in Odisha, were as early as Sanchi and Sannathi. A detailed analysis of terracotta objects and the ceramic assemblage from the culture complex has been provided.

S.K. Patnaik *et al.*, *Man and Environment* XLII(2): 42-51 [2017].
ME-2017-2A05

6. [Recent evidence of Ultrahigh Carbon Steel from Thelunganur, Tamil Nadu](#)
K. Rajan, R. Ramesh and J.S. Park

Recent investigations carried out in iron ore bearing zone of Salem region yielded interesting evidence on the production of ultrahigh carbon steel. The metallographic analysis carried out on the sword collected from an Iron Age grave at Thelunganur in Metturtaluk, Salem District

of Tamil Nadu revealed that it was made of ultrahigh carbon steel whose carbon concentration is 1.2% or above based on weight fraction. The radiometric date obtained for the carbon sample collected from the sword places it in the 13th century BCE. The evidence of iron production in India has been securely placed around 2nd millennium BCE, and that of ultra high carbon steel pushed back to 13th century BCE.

K. Rajan *et al.*, *Man and Environment* XLII(2): 52-59 [2017].
ME-2017-2A06

7. [Arikamedu: A Indo-Roman Trading Station – Revisited](#)
Sila Tripathi, C. Prakash Babu, M. Ramesh and Vijay Khedekar

Arikamedu is one of the most important early historic ports on the East Coast of India. Arikamedu excavations and explorations have shown evidence of maritime contacts between India and the Roman and Southeast Asian countries as early as the third century BCE. Recently, fresh explorations at Alagankulam, Karaikaddu, Suttukeni, Keeladi, including Arikamedu on the Tamil Nadu coast were carried out wherein rouletted ware (RW), beads and other artefacts were recovered. Among the artefacts, the most notable finding is of a miniature stone sculpture of Ganesh on the left or right bank of the Ariyankuppam River. This article discusses the analysis conducted on the rock sample of the Ganesh sculpture using the non-invasive XRD and EPMA instruments to understand the composition and probable provenance of the rock; and outline the importance of analysing pottery to understand its role in maritime trade.

Sila Tripathi *et al.*, *Man and Environment* XLII(2): 60-67 [2017].
ME-2017-2A07

8. [Incidence of Harris Lines in the Protohistoric Sub-adult Population and Among Present-day Indian Children: A Bio-cultural Perspective](#)
S.R. Walimbe

Harris line formation in archaeological and living infants and children is tested for possible etiologies, and its validity as an indicator of physiological stress is discussed in this paper. An attempt has been made to provide socio-cultural explanations for the morbidity conditions during early childhood. The study was conducted on 373 sub-adult long bones, belonging to 122 individuals of ages between births (0 month) to 60 months, recovered from the Deccan Chalcolithic levels (Western India). Under stringent medical supervision a total 256 infants and children, of the same age group (from birth to 60 months) from the villages in the vicinity of the Chalcolithic settlements were also examined. Incidence of Harris lines is 31.10% amongst the early farming Deccan Chalcolithic sub-adults, as against 17.55% found in the study conducted on present-day children. The line frequency peaks for the age bracket of '12 to 18 months', a weaning phase with its pre- and post- spans. Using an ethno-osteobiographic frame the childhood morbidity has been examined in the light of physical and cultural environment, which appears to be controlled factors like nutrition, infection, maternal health, child-care, poverty and illiteracy. Exact association of line formation and disease pattern is, however, difficult to ascertain and its predictability seems to be low. Therefore, the interpretation of Harris lines as a stress indicator still remains debatable.

S.R. Walimbe, *Man and Environment* XLII(2): 68-84 [2017].
ME-2017-2A08

9. [Mandible Morphology, Masticatory Stress and Subsistence in Ancient India: Mesolithic Foragers and Bronze Age Farmers](#)
John R. Lukacs

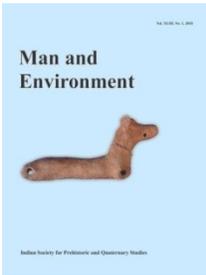
The relationship of mandible size to subsistence and diet has not been previously analyzed in prehistoric South Asia. This study had three goals: a) to present mandibular metric data for two prehistoric skeletal samples – a semi-nomadic hunter-forager group in India, and a sedentary agricultural group in Pakistan, b) to use these data to test for sex and site differences in mandible size and form in two distinct subsistence groups, and c) to determine if mandible morphology covaries with tooth size in South Asia foragers and farmers. Twenty-five measurements on mandibles from Harappan farmers (*c.* 4500-4000 BP; Punjab) and hunter-foragers from Damdama (8865-8640 BP; Uttar Pradesh) were made by the author. Data were examined for skewness and normality, sample comparisons included a test for equal variances, and asymmetry was tested for bilateral variables. Inter-sex variation in mandibular metrics was tested within samples and inter-site differences in mean mandible size were tested independently by sex. Most variables were not skewed and were normally distributed. Two bilateral linear measurements were asymmetric (5.9%, n=34), and inter-sex differences were more frequent in the hunter-foragers (32.1%, n=28) than farmers (21.4%, n=28). Mandibular measurements were often smaller in Harappan farmers than in foragers of Damdama; 71.8% were smaller in females and 64.3% in males. Geometric means based on nine mandibular measurements revealed significant differences in mandible size and non-overlapping standard deviations. This study confirms the sensitivity of mandibular size and morphology to differences in subsistence, food preparation, and diet in foragers and farmers of ancient India.

J.R. Lukacs, *Man and Environment* XLII(2): 85-100 [2017].
ME-2017-2A09

10. [Archaeological Investigations at Fort Manikdurg and Surrounding Area, District Ratnagiri, Maharashtra](#)
Sachin Vidyadhar Joshi, Abhijit Dandekar, Vishwas Gogte and Shivendra Kadgaonkar

Although mention of the three medieval forts Navate, Manikdurg, and Kasardurg were present in the *modi* documents named as “*Anjanvel chi Vahiwat*”, yet no efforts earlier had been made to trace them. It is only in recent explorations carried out that the exact location of the forts have been discovered. Different types of medieval ceramics were discovered during explorations. Pottery, bangles and iron objects were recovered in the excavation of the hill fort Manikdurg in Ratnagiri District. Fort Manikdurg is at a height of 305 m from the sea level. Before excavations, electrical resistivity survey was conducted at the site to identify the buried archeological structures. These forts are located on the medieval trade route Palshet to Karad via the Kumbharli Pass. The present paper intends to show the archaeological importance of these three forts with special reference to the excavation at Manikdurg.

S.V. Joshi *et al.*, *Man and Environment* XLII(2): 101-106 [2017].
ME-2017-2A10



Man and Environment ABSTRACTS Volume XLIII, No. 1 (January-June 2018)

1. Genesis of Indian Civilization

B.R. Mani

No abstract

B.R. Mani, *Man and Environment* XLIII(1): 1-5 [2018].

ME-2018-1A01

2. Typo-technological Analysis of the Lithic Assemblage from Janan – a Pre-Urban Harappan Site in Kachchh, Gujarat

Charusmita Gadekar, S.V. Rajesh, G.S. Abhayan, Bhanu Prakash Sharma, P. Ajithprasad, Brad Chase, Y.S. Rawat, Ambika Patel, Akinori Uesugi, K. Muhammed Fasal, Ananthu V. Dev, R. Haseen Raja, S. Kumbodharan, B. Vinuraj, K.S. Arun Kumar, M.S. Mahesh, Shad Matthias Gobinsingh and Mohammed B.S. Muhaseen

Though the concept of Harappan homogeneity along with regional diversity is now a well-established fact, the development and spread of the Harappan Civilization is a puzzle yet to be solved. Recent explorations at the site of Janan, situated on the Khadir island, Kachchh District Gujarat have brought to light significant evidence of the Early Harappan period. The discovery of Pre-Prabhas pottery, Anarta pottery, Pre Urban Harappan Sindh pottery, Rohri chert blades and other important artefacts gives evidence of contact between Kachchh, North Gujarat, Saurashtra, and Sindh, Pakistan before the Integration Era of the Indus Civilization. This is of significance, as till date only two other sites in Gujarat namely Datrana, situated in North Gujarat and Prabhas Patan (Somnath) in Saurashtra have given similar evidence. This paper is a comprehensive analysis of the lithic assemblage recovered from the site which gives evidence of crested guiding ridge technique used for the blade manufacturing process and deduced from the presence of blades as well as cores which show crested ridges running along their longer axis. The presence of Rohri chert blade fragments without any lithic debitage of the same raw material strongly suggests that these blades were imported to the site. These findings are vital in establishing links between Sindh and Gujarat during the Regionalization Era of the Harappan civilization.

C. Gadekar *et al.*, *Man and Environment* XLIII(1): 6-15 [2018]

ME-2018-1A02

3. Archaeological Investigations at Two Prehistoric Sites in West Garo Hills District, Meghalaya

Smita Devi Bora and Dwipen Bezbaruah

Prehistoric archaeological investigations in the Garo Hills have led to the discovery of several important sites. Ganol and Rongram are the two major rivers that originate from two principal mountain ranges – Tura and Arbella respectively in the Garo Hills. These two rivers

are significant since most of the sites are located near the two rivers or their tributaries. This paper discusses preliminary observations made at two sites – Thebrongre and Mishimagre, in Meghalaya. At both the sites artefacts were exposed due to road cutting. An attempt has also been made to study and compare the morphological traits of the stone artefacts recovered from these two sites.

S. Bora and D. Bezbaruah, *Man and Environment* XLIII(1): 16-22 [2018]
ME-2018-1A03

4. [Hunters in Transition: Advanced Hunter-Gatherers of the Mid/Late Holocene, Sri Lanka](#)
Raj Somadeva, Anusha Wanninayaka and Dinesh Devage

Prehistoric research in Sri Lanka is predominantly focussed on exploring human occupation of the Pleistocene period. Prehistoric culture was assessed with reference to Mesolithic technology, economy and ecology within a broad chronological framework. The terminal phase of the Mesolithic was assigned to the early second millennium BCE. Recent archaeological fieldwork has revealed evidence that advocates for a fresh perspective when studying the mid- and late-Holocene hunter-gatherer culture. An intermediate climatic zone between 300 and 600 m AMSL was explored and five locations were excavated. The artefact assemblages suggest that a new techno-cultural dynamism had emerged in the mid-Holocene. Several artefacts that could be identified as symbolic show a new perception of the world developed by the hunter-gatherers. Growing intensity of the exploitation of wild-plant resources is indicated by an assemblage of charred floral remains. Such changing traits have been evaluated with reference to the stress generated by the Holocene climatic oscillations indicated by palaeoclimatic data. AMS dates have confirmed a mid-Holocene transition by traditional hunter-gatherers on an archaeologically perceivable scale. The archaeological data accentuates a series of their resilience to climatic change, population increase and the corresponding resource deficit.

R. Somadeva *et al.*, *Man and Environment* XLIII(1): 23-38 [2018]
ME-2018-1A04

5. [Osteological Analysis of Post-Crematory Human Skeletal Remains from the Megalithic Site of Malli, Vidarbha Region, Maharashtra](#)
Rushal Unkule, Veena Mushrif-Tripathy and Virag Sontakke

Cremation is, and has been, one of the modes of disposal of the dead. The present paper deals with post-crematory human remains recovered from the megalithic site of Malli, located in District Gondia, Maharashtra. This research has helped for better understanding of the type of deposit, pyre technology, funerary practices, and the quantity and type of the skeletal elements preserved. Observations of age, sex and pathology were not made due to the fragmentary condition of the bones. X-Ray Diffraction was used to determine the temperature of the pyre during cremation.

R. Unkule *et al.*, *Man and Environment* XLIII(1): 39-43 [2018].
ME-2018-1A05

6. [Preliminary Report on Excavation at Rithi Ranjana, Saoner Tehsil, Nagpur District, Maharashtra](#)
N. Nihildas, P.P. Pradhan, Rajesh Mehar, Prasanth Sonone, Atul Kushwaha, Bhenu Thakur, Asif Batt, Arshad, Saurabh Singh, Anil Pokharia, Gurudas Shete and P.P. Joglekar

The site of Rithi Ranjana located in Khapa Village, Taluka Saoner, Nagpur District, Maharashtra was excavated in 2017-18. This site revealed an Early Iron Age settlement related to agriculture and pastoralism. The cultural remains comprised the storage bin platforms, circular huts with postholes, hearths, cup marks and different floor activities. The evidence of plant remains and extensive use of lime are noteworthy. The antiquities reported from the site comprised of beads made of semi-precious stones and terracotta, animal figurines, and few iron implements.

N. Nihildas *et al.*, *Man and Environment* XLIII(1): 44-57 [2018]
ME-2018-1A06

7. [A Preliminary Report of Chalcolithic Ceramic Analysis from Ganeshwar, District Sikar, Rajasthan](#)
Esha Prasad and R.N. Singh

The Ganeshwar Jodhpura Culture in Northeastern Rajasthan was brought to light after the excavations at Jodhpur and Ganeshwar by the Rajasthan State Archaeology Department. It has been hypothesized that the culture was a copper producing culture, trading the copper objects with the Harappans. Even though the sites were excavated on a large scale, a precise description of the pottery is absent from the reports published so far. The term OCP was used to mainly describe the pottery from both the sites as a characteristic feature of the culture. Apart from that, the pottery is mainly described on the basis of shapes and decoration without any specifications. The site of Ganeshwar was re-excavated by the Banaras Hindu University in collaboration with Cambridge University. This paper briefly discusses a new classification of the ceramics and the characterization of Ganeshwar Chalcolithic pottery.

E. Prasad and R.N. Singh, *Man and Environment* XLIII(1): 58-65 [2018]
ME-2018-1A07

8. [Preliminary Report on Excavations at Sarethi, District Faizabad, Uttar Pradesh](#)
Pushp Lata Singh, Prabhakar Upadhyay, Manoj Kumar, Anoop Kumar, Dipak Kumar Shukla, Chandra Bhushan Gupt, Upendra Singh and Mohd. Afroj

The site of Sarethi is located in block Purabazar, Tehsil Sadar, District Faizabad, Uttar Pradesh. The excavation conducted in 2016-17 revealed a rich cultural assemblage from the late NBPW to the Medieval period. The site also yielded evidences of furnaces, slag, finished and unfinished glass objects suggesting that it was a glass making centre (workshop

site) in the Ghaghara region during the Shunga-Kushan period. It is also important to note that this settlement was located on an ancient trade route from Rajghat to Kapilvastu via Sarethi, Ayodhya, Sravasti, Kopia and Kapilvastu.

Pushp Lata Singh *et al.*, *Man and Environment* XLIII(1): 66-78 [2018]
ME-2018-1A08

9. [The Archaeology of Roof Tiles: A Preliminary Chronology](#)
Uthara Suvrathan

This paper presents a preliminary typology and temporal classification of ancient and medieval roof tiles. To present an initial sequence, survey data on roof tiles from the site of Banavasi in Karnataka was compared to get information on roof tiles found in stratified contexts from excavations throughout India. Establishing a fine-grained roof tile sequence is of considerable importance for archaeology of structures in South Asia.

U. Suvrathan, *Man and Environment* XLIII(1): 79-90 [2018]
ME-2018-1A09

10. [Cranio-metric Data on Pratu Pha Human Skeletal Series, Thailand](#)
Worrawit Boonthai

The chronology of the archaeological site of Pratu Pha dates from the end of the Neolithic period (3200-2900 BCE) up to the Historical period. The site is well-known for 1872 rock paintings. The excavations yielded rich evidence of habitational remains and burials. This article presents basic anthropological data on the crania collection from Pratu Pha. On the basis of cranial morphology and studying the charred evidence, it has been postulated that there were two ethnic groups co-existing at the site during the protohistoric times, both having different customs for disposing the dead.

W. Boonthai, *Man and Environment* XLIII(1): 91-108 [2018].
ME-2018-1A10

11. [A Note on the Discovery of an Ostrich \(*Struthio camelus*\) Painting in Raisen, Madhya Pradesh](#)
Shaik Saleem

No abstract

S. Saleem, *Man and Environment* XLIII(1): 109-110 [2018]
ME-2018-1N01



Man and Environment ABSTRACTS Volume XLIII, No. 2 (July-December 2018)

1. [Two ‘Giant Cores’ from the Acheulian Site of Anagwadi, Karnataka: Inferring Technological Behaviour and Site Context](#)
Sushama G. Deo, Jayendra Joglekar and André Baptista

The Acheulian site of Anagwadi, Karnataka, India was explored and excavated in the 1960s by R.S. Pappu. A pebbly conglomerate present in the dry bed of a channel feeder of the Ghataprabha, a tributary of the River Krishna was excavated. The evidence pointed to the site’s open-air semi primary nature. However, these initial studies merely made a passing mention of a single giant core, and overlooked the other that was embedded in the very same conglomerate. The giant cores are an imperative part of the Acheulian tool production. The study of giant cores has brought to light technological aspects of the Acheulian tool manufacturing sequence at Anagwadi.

Deo *et al.*, *Man and Environment* XLIII(2): 1-7 [2018].
ME-2018-2A01

2. [Traditional Salt Making at Ningel Village, District Thoubal, Manipur](#)
Rajkumarni Barbina

Salt is an important item used in our daily food. Besides, being used as a preservative it is an important ingredient in tanning of animal hides. In colonial Mexico, salt was an important mineral required for silver processing. This mineral has been used by people all over the world since ancient times. It was also valued in ancient Rome such that the Roman army was given bags of salt as salary. The word ‘salary’ originated from the Latin word for salt. During the ancient times it was an important commodity for barter of food items. Besides sea water being a major source of salt, it was also procured from rocks and saline water sources. Like many important salt producing regions, the state of Manipur had also been producing salt from the natural salt springs found at Ningel, Chandrakhong, Sikhong and Waikhong villages, all belonging to Thoubal District. At present, only Ningel village has continued the tradition. In this paper, the researcher has used ethnographic surveys of the salt making tradition of Ningel Village of Thoubal District of Manipur and has compared the region with some of the salt producing regions around the globe.

Rajkumari Barbina, *Man and Environment* XLIII(2): 8-14 [2018].
ME-2018-2A02

3. [Newly Discovered Rangmahal Culture Sites of the Jammu Plains](#)
Navjot Kour

This paper deals with the hitherto undiscovered extension of the Rangmahal culture in the plains of Jammu. The exploration has uncovered the presence of this historical pottery, adding more information to existing data in terms of its spatial distribution and regional variability in painting techniques. This paper also aims to look into the conducive factors that lead the area of Jammu to be a part of this stylistically distinct pottery assemblage of North India. In addition, this paper contributes to the debate on the evidence of glazed ware found from the area, contemporary to the Rangmahal pottery. This pottery is apparently termed as Muslim glazed ware at most of the sites in the area. This paper will therefore stimulate further research on this relegated class of pottery.

Navjot Kour, *Man and Environment* XLIII(2): 15-32[2018].
ME-2018-2A03

4. [Lokamanya Tilak, Prehistory and the Scientific Method](#)
[K. Paddayya](#)

This paper revisits Lokamanya Tilak's views about the antiquity and homeland of the Vedic Aryans as put forward in his two well-known works, viz. *The Orion* (1893) and *The Arctic Home in the Vedas* (1903). It seeks to highlight the fact that Tilak, dissatisfied with the use of stylistic changes in the Sanskrit language for chronological purposes, preferred to rely upon the Vedic and Avestan references to the Polar origins of the Aryans. He sought to substantiate his views by taking recourse to the then freshly emerging disciplines of prehistory and glacial geology. Tilak's views also involve hypothesis formulation and other aspects of the scientific method.

K. Paddayya, *Man and Environment* XLIII(2): 33-41[2018].
ME-2018-2A04

5. [Archaeomalacology of the Harappans at Rakhigarhi, Haryana](#)
[Amarendra Nath](#)

As compared to the Gujarat peninsula, the archaeomalacological study of the finds retrieved from the Harappan settlements located in the Sarasvati-Drishadvati system is in the state of infancy. The present study based on shells from the excavations at Rakhigarhi succeeds in ventilating the role of freshwater and marine shells by highlighting their physical attributes, dietary function, source of acquisition as raw material for sustenance of the shell industry, and their contributions to the Harappan economy. Examination of wasters in relation to shell products has offered valuable inputs in the reconstruction of technological structures of this craft at the site.

Amarendra Nath, *Man and Environment* XLIII(2): 42-66 [2018].
ME-2018-2A05

6. [Archaeozoological finds from Kotada Bhadli, Gujarat, a Late Mature Harappan site](#)
[Pankaj Goyal, Prabodh Shirvalkar and Y.S. Rawat](#)

Kotada Bhadli – a Late Mature Harappan site, is located in the Nakhatrana Taluka, District Kachchh, Gujarat. The site was excavated jointly by Deccan College, Pune and the Gujarat State Department of Archaeology, Gandhinagar for three consecutive seasons (2010-2013). The excavated archaeozoological data from this site provided an opportunity to look into the nature of animal-based subsistence strategies during the Late Mature Harappan period in Gujarat. The primary archaeozoological data presented in this paper derives from more than 50,000 fragments of animal bones excavated from the site. These predominantly comprise of domestic mammals, particularly cattle, buffalo, sheep and goat. While a wide array of wild animals have also been identified, their proportion in the overall assemblage is very low. With low percentages of wild game, animal husbandry emerges as a central activity, complemented by hunting and fishing. Small game hunting, mainly of Indian hare was also identified.

Pankaj Goyal *et al.*, *Man and Environment* XLIII(2): 67-83 [2018].
ME-2018-2A06

7. [Between the Hinterlands: Preliminary Results from the *TwoRains* Survey in Northwest India \(2017\)](#)
[Ravindra N. Singh, Adam S. Green, Lillian M. Green, Amit Ranjan, Aftab Alam, and Cameron A. Petrie](#)

Survey data from northwest India are important to understanding the dynamics of urbanism in South Asia from the Indus to the Medieval periods. Previous studies have argued that the number of settlements in northwest India increased in the wake of the Indus Civilisation's de-urbanisation, a process that ended around 1900 BCE. There also appears to have been a dramatic increase in settlement during the Early Historic and Medieval periods, but the dynamics of this process are poorly understood. Given the large area and number of sites involved, clarifying these processes requires a large-scale dataset that can only be generated by linking the results of previous survey projects and increasing the precision of site location datasets, which is an objective that requires surveying new areas and revisiting previously reports sites. This paper presents the preliminary results from a pilot survey conducted in 2017 by the TwoRains project, which systematically investigated areas of northwest India that had been surveyed before 2000 or had not been previously surveyed. TwoRains combined previously reported site locations with information from historical maps and remote sensing imagery to survey these areas as comprehensively as possible. The results confirm that the study area, which includes parts of northwest India that fall between the survey extents of surveys conducted for the Land, Water and Settlement project, was an important locus of occupation and that many sites remain to be found. Settlement distributions shifted through time within the study area, with notable increases during the Late Harappan period, and also in the Early Historic and Medieval periods

R.N. Singh *et al.*, *Man and Environment* XLIII(2): 84-102 [2018].
ME-2018-2A07

8. [A Note on Circular Fortified Settlements in the Middle Mahanadi Valley, Odisha](#)
Sakir Hussain

The present-day Chhattisgarh region and western part of Odisha was known as South Kosala kingdom in historical literature. There are several archaeological settlements surrounded by moat/s and rampart wall/s. Majority of such settlements are located in Chhattisgarh, while a few are in the western part of Odisha. The present paper presents findings of a survey carried out on three (Taraporegarh, Barpali-Asurgarh and Rampur-Asurgarh) circular fortified settlement sites in the Middle Mahanadi Valley of Odisha.

S. Hussain, *Man and Environment* XLIII(2): 103-107 [2018].
ME-2018-2A08