



Man and Environment

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 Hatnur.

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].
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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 Metturlaluk, 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 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