

Man and Environment
ABSTRACTS
Volume XXXV, No.1 (January-June 2010)

Relevance of Archaeology for Studies in Recent History

S. Nagaraju

S. Nagaraju, *Man and Environment* XXV(1): 1-7 [2010]
ME-2010-1A01

Status of Archaeology of the Middle Ganga Valley: Stone and Early Iron Age Cultures

Vidula Jayaswal

Vidula Jayaswal, *Man and Environment* XXV(1): 8-23 [2010]
ME-2010-1A02

Systematic Transect Survey of the Jurreru Valley, Kurnool District, Andhra Pradesh

Shipton, C.B.K., B. Janardhana1, J. Koshy, M.D. Petraglia, M. Haslam and R. Korisettar

Here we present the methods and findings of a systematic transect survey conducted in the Jurerru Valley, Kurnool District, Andhra Pradesh. Systematic protocols for locating, identifying and recording archaeological localities are detailed. The results of this transect survey are compared with those of a previous unsystematic survey to demonstrate some of the biases in the latter. The systematic data is then used to understand and compare landscape use during different periods of human occupation. The article demonstrates that systematic transect surveys can be used to examine landscapes of rich archaeological heritage.

Shipton, C.B.K., *et al.*, *Man and Environment* XXV(1): 24-36 [2010]
ME-2010-1A03

Changing Patterns of Settlement in the Rise and Fall of Harappan Urbanism and Beyond: a Preliminary Report on the Rakhigarhi Hinterland Survey 2009

R.N. Singh, C.A. Petrie, V. Pawar, A.K. Pandey, S. Neogi, M. Singh, A.K. Singh, D. Parikh and C. Lancelotti

This paper presents a report of the Rakhigarhi Hinterland survey, which was a focused village-to-village survey of the hinterland of the major urban site of Rakhigarhi, in District Hissar, Haryana, India. During August and September 2009, a total of 127 sites were visited, and a sizable proportion of these sites, from all periods, were previously unknown. The

results of this survey highlight a number of problems with the existing site distribution data sets and have important ramifications for our understanding of the dynamics of settlement in Haryana throughout proto- and early history. They will also make an important contribution to our understanding of the rise of cities in western India during the period of the Indus Civilisation.

Singh R.N., *et al.*, *Man and Environment* XXV(1): 37-53 [2010]
ME-2010-1A04

Mitathal: New Observations based on Surface Reconnaissance and Geologic Provenance Studies

V.N. Prabhakar, Tejas Garge, Randall Law

The Indus Civilization settlement of Mitathal, District Bhiwani, Haryana is rapidly being leveled due to agricultural activities. A short surface reconnaissance was conducted during which, among other things, a steatite seal was recovered. A small fragment of that seal was analyzed using instrumental neutron activation analysis (INAA) and determined to have been made from raw steatite that most probably originated in the Alwar District of northern Rajasthan. This, along with evidence that rock outcrops near the Haryana/Rajasthan border were being exploited for manufacture of grinding stones, indicates that residents of the site had important trade relationships extending towards the south.

V.N. Prabhakar, *et al.*, *Man and Environment* XXV(1): 54-61 [2010]
ME-2010-1A05

Ecological Continuity: An Explanation for Agricultural Diversity in the Indus Civilization and Beyond

Steven A. Weber, Tim Barela and Heather Lehman

The northwest portion of South Asia was characterized by great ecological and cultural diversity from the prehistoric to the historic era. Soils, climates and moisture patterns that differentiate one region from another remained relatively stable from the time of the Indus Civilization into the colonial period. Ecologically distinct regions were closely associated with specific agricultural strategies that were equally as distinct. The argument put forward in this paper is that we can better understand the agricultural diversity and hence, cultural diversity of northwest South Asia in these periods, by identifying those ecological zones that remained relatively stable over time.

Steven A. Weber, *et al.*, *Man and Environment* XXV(1): 62-75 [2010]
ME-2010-1A06

Faunal Remains from Jaidak (Pithad), a Sorath Harappan Site in Gujarat

P.P. Joglekar and Pankaj Goyal

This article reports the results of the analysis conducted on the faunal material unearthed during excavations at Jaidak, a Sorath Harappan site in Gujarat. A single trench (5AC3) was

selected as a judgement sample (n = 3885). The analysis revealed a wide spectrum of animal species that includes domestic mammals, wild mammals, reptiles, birds and molluscs. Every bone fragment was carefully examined for any signature of bone modifications to reveal various aspects of taphonomy. It has been noticed that people were involved in skinning, evisceration, dismembering, filleting and fracturing the bones for the extraction of marrow besides using the broken fragments of longer limb bones for bone working.

P.P. Joglekar and Pankaj Goyal, *Man and Environment* XXV(1): 76-85 [2010]
ME-2010-1A07

Faunal Remains from the Iron Age and Early Historical Settlement at Mahurjhari, District Nagpur, Maharashtra

Arati Deshpande-Mukherjee, P.K. Thomas and R.K. Mohanty

Animal remains are a common component of most Iron Age/Megalithic sites in the Vidarbha region of Maharashtra. These have been found in association with human burials as well as in habitation deposits. As most of the faunal data was recovered from burials, faunal exploitation in Megalithic/ Iron Age habitational context has not been properly studied. In this regard the 2001-2004 excavations at Mahurjhari are important as they have helped unearth a Megalithic/Iron Age habitation as well as an Early Historical settlement. In this paper are presented results of the faunal analysis carried out on the animal remains recovered from both these settlements. The detailed study has provided fresh insights into aspects related to the use of different animals and their role in the Iron Age and Early Historic subsistence economy at the site.

Deshpande-Mukherjee, A., *et al.*, *Man and Environment* XXV(1): 87-102 [2010]
ME-2010-1A08

A Study of Glass Bangles from Abhaipur, District Pilibhit, Uttar Pradesh

Anup Mishra, Deepak Singh and Anuj Sharma

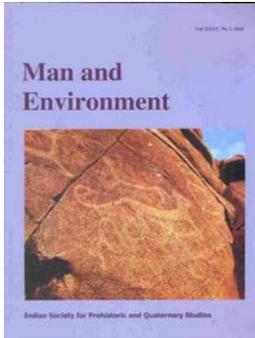
Though glass bangles are reported right from the Painted Grey Ware (PGW) Period in the Ganga Valley, rampant use of glass bangles begins only in the Northern Black Polished Ware (NBPW) period in north India. There are a number of excavation reports, which provide evidence of glass bangles in stratified context. However, none of these emphasizes the typotechnological evolution of bangles. The present examines glass bangles of PGW and NBPW periods obtained from excavations at Abhaipur.

Mishra Anup, *et al.*, *Man and Environment* XXV(1): 103-108 [2010]
ME-2010-1A09

Note on a Microlithic Site at Judwani, District Sonbhadra, Uttar Pradesh

Vibha Tripathi and Prabhakar Upadhyay

Tripathi V., and Upadhyay P., *Man and Environment* XXV(1): 109-111 [2010]
ME-2010-1A10



Volume XXXIV, No. 2 (July-December 2010)

Systematic Transect Survey Enhances Investigations of Rock Art in its Landscape Setting: An Example from the Katavani Kunta Valley, Kurnool District, Andhra Pradesh

James Blinkhorn, Janardhana Bora, Jinu Koshy, Ravi Korisettar, Nicole Boivin and Michael Petraglia

A reconnaissance survey conducted in the Katavani Kunta Valley, Kurnool District, identified a significant concentration of rock art sites in a narrow upland valley immediately north of the Jurreru River Valley. However, this reconnaissance provided little data relating to the broader archaeological landscape in which this body of imagery is situated, or the spatial distribution of sites throughout the valley. A systematic transect survey was subsequently designed and undertaken to examine these factors. The results of this survey show a richer archaeological landscape and a greater spatial diversity of sites than was previously known. Further to this, a comparison of different survey techniques shows that systematic transect techniques provide an accurate model with which to characterise this archaeologically rich valley and an important methodological tool for investigating rock art landscapes in general.

James Blinkhorn, *et al.*, *Man and Environment* XXXV(2): 1-14 [2010]
ME-2010-2A01

Reconstructing Operational Sequences: A New Methodology for the Study of Seal Carving in the Indus Civilization

Adam S. Green

This pilot study presents a new methodology for reconstructing the operational sequences carvers used to engrave stamp seals during the Indus civilization's urban period (2600-1900 B.C.). Drawing upon the anthropology of technology, this methodology shifts the object of study away from static morphological attributes to dynamic sequences of actions. Using experimental replication and microtopographic analysis, the operational sequences used to produce two Indus seals from Chanhudaro are reconstructed. Significant contrasts are evident in the operational sequences used to produce each seal, suggesting diversity in the social logics that mediated the relationships between carvers and the social representations that underpinned the Indus civilization's administrative system.

Adam S. Green, *Man and Environment* XXXV(2): 15-34 [2010]
ME-2010-2A02

Further Research into Harappan Metrology at Dholavira

Michel Danino

A system of linear units had been earlier proposed for Dholavira's elaborate town-planning and the specific proportions for its successive enclosures. This paper discusses objections to the proposed system, and presents fresh evidence on the accuracy of the published dimensions of Dholavira's fortifications. It then interprets new data about the city's reservoirs in terms of the proposed linear units.

Michel Danino, *Man and Environment XXXV(2)*: 35-44 [2010]
ME-2010-2A03

Review of Archaeological Investigations in the Protohistoric and Historical Archaeology of Vidarbha

Reshma Sawant

During the colonial and post-colonial periods, the study of protohistoric and historical archaeology in Vidarbha witnessed various phases of research. This paper endeavors to understand research concepts and contributions at individual and institutional levels, since the beginning of antiquarian studies in this region.

Reshma Sawant, *Man and Environment XXXV(2)*: 45-65 [2010]
ME-2010-2A04

A Note on Two Protohistoric Sites in Deodurga Taluk, District Raichur, Karnataka

H. Chandrashekar

This article reports new discoveries of rock bruising, mainly of the Chalcolithic period, in Maladkal, and megalithic menhirs at Hireboodur, Raichur district, Karnataka.

Chandrashekar H., *Man and Environment XXXV(2)*: 66-69 [2010]
ME-2010-2A05

Geophysical Investigations of a Sand Deposit at Kelshi, Ratnagiri District, Maharashtra

Ashok Marathe, R.S. Wadhwa and M.S. Chaudhari

Kelshi is a coastal village, located on the southern bank of the Bharja river in Dapoli taluka of Ratnagiri district. Artefacts collected from the site showed the existence of human habitation for at least seven centuries. The habitation site is covered by +20 m thick sand deposit. Geophysical investigations for delineation of subsurface stratigraphy and buried artefacts

were carried out. Seismic Refraction, Electrical Resistivity Imaging, Ground Penetrating Radar and Differential Global Positioning Surveys were conducted to observe the nature of strata and to uncover buried artefacts. The investigations were fruitful in understanding the depositional environment of the sand deposit.

Ashok Marathe, *et al.*, *Man and Environment* XXXV(2): 70-80 [2010]

ME-2010-2A06

Updates on the Antiquity of Iron in South Asia

Rakesh Tewari

The role of iron has been emphasized from time to time in the development of human cultures. According to the prevailing view its introduction in the Ganga Plain is associated with the arrival of the Aryans from the west around 1000 B.C. Available conventional radiocarbon dates also support this hypothesis to a certain extent. Doubts have been expressed about an earlier antiquity for iron. Against this background, the advent of iron in the Ganga Valley is datable from the early to late second millennium BC on the basis of conventional and calibrated radiocarbon dates. Some scholars have refuted the new early evidence of iron on various grounds. This paper deals with these doubts in the light of new evidence.

Rakesh Tewari, *Man and Environment* XXXV(2): 81-97 [2010]

ME-2010-2A07

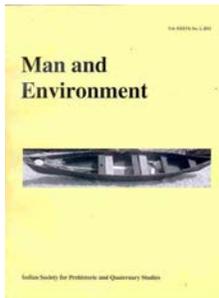
Megalithic Burials of Iron Age-Early Historic Kerala: An Overview

S.B. Darsana

Archaeological surveys undertaken from 2006 to 2008 as part of Historical Atlas Project of South India revealed a number of Iron Age-Early Historic megalithic sites in the districts of Ernakulam, Idukki, Kannur, Kozhikode and Malapuram in Kerala. In addition, several previously reported archaeological sites were documented on the map using GIS. Based on the collected data, spatial and cultural patterning of archaeological and historical sites of Kerala was studied by the author. The paper presents an overview of Kerala megaliths and deals with the analysis of the megalithic burial monuments along with grave goods. A new typological system is also proposed for the megalithic burials of Kerala.

Darsana S.B., *Man and Environment* XXXV(2): 98-117 [2010]

ME-2010-2A08



Volume XXXVI, No. 1 (January-June 2011)

Contribution of Professor Hasmukh Dhirajlal Sankalia to Mesolithic Studies in India

V.N. Misra

Misra, V.N., *Man and Environment* XXXVI(1): 1-13 [2011]

ME-2011-1A01

‘... Given another life ...’*

Rakesh Tewari

Tewari Rakesh, *Man and Environment* XXXVI(1): 14-30 [2011]

ME-2011-1A02

Hitherto Undescribed Megalithic Burials from South Asia: The Skeletal Record

S.R. Walimbe, P.C. Caldwell-Ott and K.A.R. Kennedy

India, Pakistan and Sri Lanka have offered archaeologists and biological anthropologists a wealth of information on prehistoric human inhabitants of the Indian Iron Age. Hitherto undescribed or partially examined skeletal remains from this cultural tradition are from burial sites, of which some are associated with megalithic monuments. The burial sites are named after towns and villages near the loci where human skeletal remains have been found. Several burials from Andhra Pradesh were excavated by teams under the supervision of the Department of Archaeology of the Government of Andhra Pradesh. Among some of the excavated sites, in the Krishna District of Andhra Pradesh include Agripalli, Kadambapur, Tenner and Veerabyine Kunta, as discussed in the present study. Morphometric and statistical analyses of human remains from this part of India include data comprehensively reported for the first time by the present authors. It is concluded that comprehensive results of our investigation when considered along with those from previously published data about Indian Iron Age skeletal and dental series support this hypothesis: the Iron Age specimens from peninsular India reveal phenotypic heterogeneity. There is no scientific evidence that Iron Age peoples of peninsular India were “racially distinctive” and/or migrants arriving from lands outside the Indian subcontinent. A different hypothesis has been favoured by some past and present investigators of South Asian prehistory, namely that megaliths, specific burial practices and iron technology were inaugurated by foreign invaders arriving from beyond the shadows of the Himalayan mountains, perhaps from Central Asia. These migrants eclipsed the native Neolithic populations. Do archaeological and skeletal scientific observations support the later conjuncture?

Walimbe, S.R., *et al.*, *Man and Environment* XXXVI(1): 31-70 [2011]

ME-2011-1A03

Study of Two Skeletons from Leshemi: A Burial Site in Nagaland

Veena Mushrif-Tripathy and Tiatoshi Jamir

This article discusses the discovery and analysis of two male skeletons from Leshemi, a Kozami village situated in Phek district, Nagaland. These comprise a young and a middle-aged adult respectively. Important findings include the pathology of the vertebral joint and non-specific infections.

Veena Mushrif-Tripathy and Tiatoshi Jamir, *Man and Environment* XXXVI(1): 71-78 [2011]
ME-2011-1A04

A Study of Traditional Boats of Goa

Zeeshan A. Shaikh, Sila Tripathi and Vasant Shinde

Folk songs of Goa frequently mention 'Vodem' which denotes a canoe. The present paper discusses traditional boats of Goa, namely dugouts, extended dugouts with and without outrigger and plank-built boats, and stages in boat-building. A recent discovery of stone panels with a boat (canoe) motif is interesting in this context.

Zeeshan A. Shaikh, *et al.*, *Man and Environment* XXXVI(1): 79-87 [2011]
ME-2011-1A05

Potting Skills: An Ethnographic Perspective

V. Vinod and K. Krishnan

This paper documents the skill of potters from five workshops in the region around Bagasara and reflects upon the notion of specialization. Variations in attributes are measured using morphometric methods. Variables considered for the analysis are the height, thickness and diameter of the vessels. The paper further discusses the skill of the potters, specialization and the notions of standardization.

V. Vinod and K. Krishnan, *Man and Environment* XXXVI(1): 88-91 [2011]
ME-2011-1A06

New Discoveries of Stone Alignment and Megalithic Burials in Karnataka

Srikumar M. Menon, Mayank N. Vahia and Kailash Rao

This short communication describes two hitherto unreported megalithic sites in Karnataka, discovered during exploration. One of the sites is at the village of Chikel Chetti, near Bandipur Wildlife Sanctuary. This site consists of 5 exposed cist burials and 5 undisturbed

cairns. The second site is a stone alignment at Aaraga Gate near Tirthahalli. Eight surviving menhirs of the stone alignment were noted.

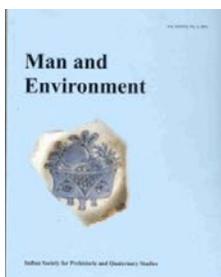
Srikumar M. Menon, *et al.*, *Man and Environment* XXXVI(1): 92-95 [2011]
ME-2011-1A07

An Estimate of Raymond Allchin's Contributions to South Asian Archaeology with Special Reference to Southern Deccan

K. Paddayya

This paper seeks to estimate the importance of Raymond Allchin's contribution to field archaeology in Southern Deccan, with special reference to his work on the Neolithic ashmounds published as a monograph entitled *Neolithic Cattle-Keepers of South India: A Study of the Deccan Ashmounds* (1963). Reference is then made to his work in Pakistan, Sri Lanka and other parts of South Asia and also to his various efforts to promote studies in the early history and archaeology of South Asia in Western Europe.

K. Paddayya, *Man and Environment* XXXVI(1): 96-116 [2011]
ME-2011-1A08



Volume XXXVI, No. 2 (July-December 2011)

Newer Perspectives in the Investigation of Early Agro-pastoral Cultures of India

K. Paddayya

Paddayya K., *Man and Environment* XXXVI(2): 1-19 [2011]
ME-2011-2A01

Identification of Structure and Morphology of raised beaches in Southeastern Iran by the Application of Physical and Chemical Methods

Hossein Negaresh, Ali Akbar Mirzaei, Mehdi Mortazavi and Mostafa Faizi

Raised beaches are found in Iran all along the Oman Sea, where they extend from the suburb of Jask Port to Gowatre Bay, right into Pakistan. The beaches started developing some thirty to fifty thousand years ago. Their growth rate has been calculated to be one to three millimetres a year. The rate of uplifting increases steadily from west to east; it is nearly one metre at Jask Port, rises to more than a 100 m in the suburbs of Chabahar Port and goes up to 500 m at Karachi port. The origin and spread of these beaches have not been studied so far. In the present paper the authors report the findings of their investigation into the structure and morphology of these beaches. Characterization of samples by X-Ray diffraction (XRD), BET measurement and thermal analyses like TGA and DSC, along with analytical measurement, using Flame Atomic Absorption (FAA) have been carried out to determine the type and origin of the beaches.

Hossein Negaresh, *et al.*, *Man and Environment* XXXVI(2): 20-27 [2011]
ME-2011-2A02

Cranial Diversity among South Asians: A Global Perspective

Samanti Kulatilake

The appearance and spread of modern humans in South Asia has been a topic discussed by cultural and biological anthropologists, archaeologists, and linguistic anthropologists. Of interest is the apparent geographic proximity of South Asia to the regions in Africa, now thought to be the cradle of modern human origins. South Asia is a region that has been successively migrated into by expanding human populations. The cultural and biological

diversity seen among South Asians today is largely a result of the diversity that would have existed among the incoming populations. Cranial diversity as observed through craniometric variation among South Asian and global populations is explored and the observed patterns are discussed in connection with the origin and dispersal of modern humans and the local history of South Asia.

Samanti Kulatilake, *Man and Environment* XXXVI(2): 28-34 [2011]
ME-2011-2A03

Palaeoethnobotanical Finds from Ancient Naimisharanya, District Sitapur; U.P. during Kushana Period (A.D. 100-300)

Chanchala Srivastava and D.P. Tewari

The paper discusses the results of morphological investigations of seed and fruit remains from the ancient mound at Naimisharanya in district Sitapur of Uttar Pradesh, from Kushana Periods (approx. 100 to 300 A.D.) and their archaeological significance. The finds of seed and fruit remains are in carbonized as well as semi-carbonized states. The finds include cereals (barley, bread wheat and rice); minor crops like *sawan* and Italian millet; pulses (field pea, black-gram, green-gram and lentil); seeds of cucurbit/vegetable crop; along with seeds of cotton (*Gossypium* sp.) and silk-cotton (*Salimalia malabarica*). Seeds of custard apple, seed/fruit remains of neem (*Azadirachta indica*) and jujube fruit-stones have also been encountered. The evidence of neem (*Azadirachta indica*) seed/fruit remains, a medicinally valuable tree, is significant. Weeds and wild taxa have also been encountered in association with field-crop remains. These belong to wild grasses such as *Andropogon* sp. (Blue stem grass), *Dactyloctenium aegyptium* (Crow-foot grass), *Eleusine indica* (Goose grass), *Panicum* sp. (Panicum grass), *Poa* sp. (Blue or Meadow grass); *Trianthema portulacastrum* (Lalsabuni) and *Indigofera hirsuta* (Hairy Indigo). *Dactyloctenium aegyptium* and *Trianthema portulacastrum* may have been the weeds in summer group crops like rice; whereas *Indigofera hirsuta*, represent the weed component in winter crops like wheat and barley.

Chanchala Srivastava and D.P. Tewari, *Man and Environment* XXXVI(2): 35-44 [2011]
ME-2011-2A04

Painted Rock Shelters at Dharul, in the Upper Tapi Basin, Madhya Pradesh

Kantikumar Anant Pawar, Ganesh Halkare, Puroshottam Dahedar

Central India, with the exception of some parts of the Deccan Trap, is extremely rich in rock art. The river Tapi is one of the major rivers of this region with its many tributaries. The discovery of four painted rock shelters, in 2007, provided interesting evidences of rock art and its associated material culture. This work discusses the important finds, and compares them with previous discoveries.

K.A. Pawar, *et al.*, *Man and Environment* XXXVI(2): 45-50 [2011]
ME-2011-2A05

Excavations at Kanjetar and Kaj on the Saurashtra Coast, Gujarat

A.S. Gaur, Sundaresh, G.S. Abhyan and P.P. Joglekar

Onshore excavations were undertaken at Kanjetar and Kaj around Kodinar in Gujarat. Kanjetar is located about 12 km southwest of Kodinar on the coastal region. This is a single culture site of the Harappan phase. The entire area is a known agricultural land and the maximum habitation deposit is about 60 cm from the surface. The pottery is typical of Saurashtra Harappan type. Kaj is located about 10 km east of Kodinar on the bank of Modhwada Creek. The site is situated about 2 km east from the village Kaj and presently it is called *Juna Kaj*. This site has a three-fold cultural sequence where the oldest habitation belongs to the Harappans, followed by the historical and later medieval period respectively. The location of the site indicates that the creek could have been used as a sheltered harbour. Interestingly, Roman amphorae were collected during onshore explorations from the site of Kaj. This article discusses the findings of the onshore excavations that were undertaken at these two sites.

A.S. Gaur, *et al.*, *Man and Environment* XXXVI(2): 51-57 [2011]
ME-2011-2A06

Archaeological Investigations in Southern Haryana

Narender Parmar

The present paper deals with results obtained from recently conducted archaeological investigations (village to village survey) in Southern Haryana. The alluvial plains of palaeochannels of ancient Saraswati-Drasdwati show extensive relics of archaeological settlements. Nevertheless, as one moves away from the fertile region and enters the dry area of sand dunes and Aravalli outcrops, alluvial plains become sparse especially in Southern Haryana. This study hopes to throw light on the cultural process, settlement system and nature of sites between the Indo-Gangetic Plain and the Thar Desert. The main focus of this paper is to highlight the archaeological potential of this semi-arid zone.

Narender Parmar, *Man and Environment* XXXVI(2): 58-65 [2011]
ME-2011-2A07

Explorations along the Ghaggar River and Sirhind Nala in Haryana and Punjab

Vivek Dangi

This paper is a preliminary report of the archaeological exploration, whose primary focus was a village-to-village survey of Tohana tehsil of Fatehabad district, Haryana, besides a revisit of a few sites in Mansa and Sangurur district of Punjab. During August-September 2008 a total of 60 sites were visited and documented. This study aims at presenting a holistic

understanding of the origin and development of the early farming cultures in the region, and, to give general information about the archaeological sites in the region. The material remains collected during the survey such as pottery, beads and lithic objects are also discussed in detail.

Vivek Dangi, *Man and Environment* XXXVI(2): 66-87 [2011]
ME-2011-2A08

New Insights into Settlement along the Ghaggar and its Hinterland: a Preliminary Report on the Ghaggar Hinterland Survey 2010

R.N. Singh, C.A. Petrie, V. Pawar, A.K. Pandey and D. Parikh

This paper presents a report of the *Ghaggar Hinterland Survey*, a focussed village-to-village survey of the hinterland of the middle course of the Ghaggar River (particularly Fatehabad District, Haryana and Mansa District, Punjab). During November and December 2010, a total of 182 sites were visited. A sizable proportion of the visited sites were previously unknown, including sites of all periods. The results of this survey serve to reiterate a number of problems with the existing site distribution data sets for the region, and, have important ramifications for our understanding of the dynamics of settlement in Haryana and the southern Punjab throughout proto- and early history. This survey also helps make an important contribution to our understanding of the rise of cities in western India during the periods of the Indus and Early Historic urbanisation, and, the role that proximity to rivers and water sources played in these processes.

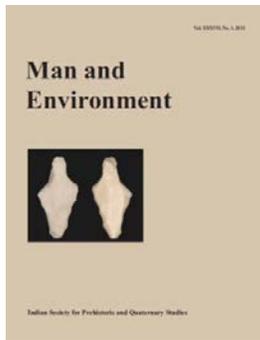
R.N. Singh, *et al.*, *Man and Environment* XXXVI(2): 89-106 [2011]
ME-2011-2A09

Study of Chinese Porcelain Sherds of Old Goa, India: Indicators of Trade Contacts

Sila Tripathi, Rohini Pande and V. Gopala Rao

Chinese ceramics have a long history of evolution and distribution. Chinese ceramics have been discovered from habitations, ports, trade centres and shipwrecks sites which facilitated the precise dating of sites and associated findings. The paper deals with Chinese porcelain sherds found during exploration at Old Goa. The role of Chinese ceramics in maritime history between Goa and Portugal, their period and kiln have been described and compared with similar sherds which were found at the St Augustine Church of Old Goa.

Sila Tripathi, *et al.*, *Man and Environment* XXXVI(2): 108-117 [2011]
ME-2011-2A10



Volume XXXVII, No. 1 (January-June 2012)

Statistical Studies of the Indus Script

Nisha Yadav and Ambuja Salgaonkar

Indus script and art have been found on seals and other inscribed objects. Ideas of geometry, symmetries and other intricate art work of the Indus people are best seen on these miniature objects. Writing holds an important clue to the mind of the people and hence the unambiguous decipherment or at least basic understanding of Indus script can provide new avenues to understanding this culture. The main reasons why Indus script has remained undeciphered is that the writings is in small texts, there are no bilingual inscriptions and the underlying language(s) is unknown. While several interpretations of its contents have been put forward, no tools are available to validate any interpretation in terms of the context of sign usage and their environment. We therefore analysed the environment under which the signs and sign sequences appeared in the Indus writing without assigning any meaning to the signs. We identified some aspects of the syntactic structure of the Indus writing. It is hoped that this study will provide a model independent test against which any interpretation of Indus writing can be checked. In this paper we discuss some of the constraints that any proposed interpretation must satisfy.

Yadav and Salgaonkar, *Man and Environment* XXXVII(1): 1-7 [2012]
ME-2012-1A01

Stone Drill Bits from Dholavira – a Multi-faceted Analysis

V.N. Prabhakar, R.S. Bisht, R.W. Law and J.M. Kenoyer

The excavation at Dholavira, district Kachchh, Gujarat brought to light evidence of a bead making industry and along with a large collection of drill bits. These drill bits are mostly made of 'Ernestite'. The proper geologic origin of 'Ernestite' is not yet clear. It has been observed that 'Ernestite' drills played a major role in the advancement of technology in the perforation of beads made of siliceous materials. This technology is largely confined to Harappan Culture during which beads were extensively exported to Mesopotamia. Dholavira has yielded not only complete drills, but also 'Ernestite' raw materials from which the drill were made. A total 1202 'Ernestite' drills along with a few chert drills have been analyzed and throw light on the pattern and state of the drills that have been used in Dholavira. An extensive study on drills from a Harappan site has been undertaken for the first time, and

similar such studies from other contemporary sites may further throw light on a various aspects related to their technology and use pattern.

V.N. Prabhakar , *et al.*, *Man and Environment XXXVII*(1): 8-25 [2012]
ME-2012-1A02

A Note on Kanah Gwemeg: A Bronze and Iron Age Graveyard in the Ilam Province, Western Iran

Davoud Davoudi and Rouholah Nourolahi

Several ancient graveyards in Ilam province in Western Iran have been excavated by Belgian Archaeological Mission from 1965 to 1979. In archaeological literature, this part of Iran is known as Lurestan's Push-I Kuh. In 2011 fresh exploration was conducted at one of these graveyard called as Kanah Gwemeg. The site has been badly looted. Due to that, surface evidence including tomb structures and pottery fragments are mixed together. These damages make the situation complicated for understanding the cultural sequences. The aim of the present paper is to discuss one of the most important sites in the area which has not been previously studied.

Davoud Davoudi and Rouholah Nourolahi, *Man and Environment XXXVII*(1): 26-30 [2012]
ME-2012-1A03

Faunal Remains from the Late Harappan Phase at Mitathal, Bhiwani District, Haryana

C.V. Sharada, P.P. Joaglekar and V.S. Shinde

The modern village of Mitathal is located roughly 12 km to the southwest in the tehsil and district of Bhiwani. The ancient site (28° 53' 31" N and 76° 10' 8" E), with the same name, is situated approximately 1.5 km southeast of the district headquarters of Bhiwani. The site was earlier reported and subsequently excavated by Suraj Bhan in the 1960's. Two ancient habitation mounds separated by a narrow gully were present. A vertical excavation, primarily comprising an index trench, was conducted in the centre of the main so-called citadel mound for just one season in April 2007 jointly by the research Institute for Humanities and Nature, Kyoto, Deccan College, Pune and M.D. University Rohtak. The aim was to reanalyse and revise the layers and the cultural and ceramic sequence of the site with a regional perspective. Only four layers were confirmed and some interesting features like a furnace were exposed. The index trench yielded a considerable quantity of animal bones and a few molluscan shells. The faunal material (n =674) from this trench was classified, examined, photographed and quantitatively analyzed at the Archaeozoology laboratory at Deccan College, Pune, following the well-established internationally standardized procedure. The faunal assemblage, it was found, displayed expected diversity akin to other Harappan sites in the region. It consisted of skeletal elements of several vertebrates as well as many invertebrates. Mammals identified at Mitathal included cattle, buffalo, sheep, goat, pig, dog and a wide spectrum of wild animals such as wild pig, deer, antelope, porcupine, rodents and hare. The non-mammalian animals included birds, fishes and molluscs.

C.V. Sharada, *et al.*, *Man and Environment XXXVII*(1): 31-41 [2012]
ME-2012-1A04

On the Typology and Petrography of Wari-Bateswar Ceramics

K. Krishnan and Sikder Md Zulkernine

The paper outline the typology and petrography of ceramics recovered from excavations in 2004-05 at Wari-bateswar in Bangladesh. The ceramics are characterized based on thin-section analysis. This characterization is done based on the mineralogy and texture of non-plastic inclusions. This gives an overall idea of the clay paste preparation techniques.

K. Krishnan and Sikder Md Zulkernine, *Man and Environment* XXXVII(1): 42-50 [2012]
ME-2012-1A05

A Note on the Human Skeletal Remains from the Iron Age Urn Burial Site of Agara Orathur, Lower Kaveri Valley, Tamil Nadu

Veena Mushrif-Tripathi, V. Selvakumar and S. Gowrisankar

Urn burials containing human skeletal remains were discovered from the megalithic site of Agara Orathur, Nagappattinam district of Tamil Nadu. The urn burials came to light due to present day activity, which led to some disturbance of the burial remains. This paper discusses post-mortem treatment and the taphonomic changes observed on these remains. Given the limited skeletal remains recovered, focus only on craniometry was possible.

Veena Mushrif-Tripathi, *Man and Environment* XXXVII(1): 51-56 [2012]
ME-2012-1A06

Survival of Food Gathering Traditions among the Loktak Lake Dwellers in Bishnupur District, Manipur

P. Binodini Devi

The Ithing, Karang and Thanga are small islands in Loktak, the largest freshwater lake in North east India, which is located in the Bishnupur district, Manipur. The inhabitants of these islands live mainly on collecting wild food plants and fishing. This paper attempts to provide a better interpretation of the role played by fish in prehistoric diet, techniques involved in fishing, types of fishing tools and indigenous methods of preservation, in addition to the role played by ecology and environment in the subsistence pattern and development of the inhabitants.

P. Binodini Devi, *Man and Environment* XXXVII(1): 57-63 [2012]
ME-2012-1A07

A Study of Rock Shelters from Nagauri Hill, Madhya Pradesh

Sachin Kumar Tiwary and Rusav Kumar Sahu

The present paper reveals the archaeological significance of Nagauri Hill, Madhya Pradesh, which is very close to the World Heritage Monument of Sanchi. It was V.S. Wakankar in the year 1960 who discovered the rock art from this site. Later, a host of scholars like Narayan

Vyas and others worked some aspects of the rock art of the site. Although, no comprehensive study has been undertaken regarding the archaeological significance of the site so far, nevertheless the site has yielded microlithic tools (geometric and non-geometric), grinding holes, potteries of medieval period, and early historic sculptures of both finished and unfinished variety. The site had been used as a quarry during the Early Historic period when the grand stupa of Sanchi was constructed which is further testified from the masonry marks. Hence, the present article is a humble endeavour to discuss holistically the prehistoric and historic remains of the site along with the conservation problems that the prehistoric rock-shelters are facing currently.

S.K. Tiwary and R.K. Sahu, *Man and Environment* XXXVII(1): 64-69 [2012]
ME-2012-1A08

Understanding Lanjia Saora Tribal Art Traditions and Rock Art of Central India: An Ethnoarchaeological Perspective

Tosobanta Padhan

This research paper deals with the rock art traditions and tribal arts of the little known Lanjia Saora forest tribe of southern Orissa (eastern India). The tribal art of the Saora has striking similarities with the Central Indian prehistoric rock art in terms of their style, themes, colour, techniques, ritual and ceremonial character in addition to overall nature of the painting. An attempt is made for a comprehensive study of the primeval tribal art in order to understand the Central Indian rock art traditions. Systematic comparison is attempted with some selected rock art motifs of central India, with particular reference to the Bhimbetka group of rock art. In the preliminary study, different evolutionary phases of the tribal art are observed. This valuable tradition is vanishing rapidly with the impact of modernisation. Suggestions are also made to safeguard and document this priceless heritage for further study.

Tosobanta Padhan, *Man and Environment* XXXVII(1): 70-86 [2012]
ME-2012-1A09

An Ethno-Linguistic Perspective of Names of Birds in great Andamanese Language

Satish Pande and Anvita Abbi

Present Great Andamanese (PGA) is a moribund language and is on the verge of extinction. The current study is an outcome of the first-hand collected data in the interdisciplinary research in linguistics and Ornithology. We present an analysis of bird names from 14 avian Orders, 35 Families and 101 Species recognized by the Great Andamanese including the current conservation status, threats and distribution of avian species, endemic to the region. Indigenous names in PGA language were analyzed linguistically and discernible categories were classified empirically. Since the identifiable categories include avian names with single, double and triple attributes the semiotic analysis of the names of birds exposes the world view of the Great Andamanese. What emerges is a typology of attributes where each attributes signifies a distinct avian related morphological, ornithological and semiotic

behaviour. The present study, which is a first of its kind, of historical nature, is important since it can be used in future to establish any relationship with other languages and tribes of the Andaman Islands.

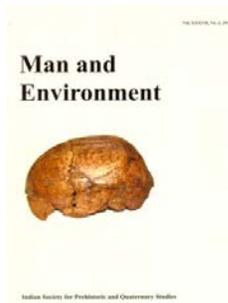
Satish Pande and Anvita Abbi, *Man and Environment* XXXVII(1): 87-95 [2012]
ME-2012-1A10

A Note on Recent Explorations in the Palani Hills, Tamil Nadu

R.N. Kumaran, M. Saranya and V.P. Yathees Kumar

Due to explorations and a few excavations in the Palani hills, an off-shoot of the Western Ghats, the archaeological heritage of this region is known to some extent. Recent explorations followed by excavations pushed back the antiquity of this region to the Pre-Iron Age period and revealed the occurrence of archaeological and historical sites mostly situated in this stunted rainy forest consisting of thick jungles. These sites are discussed in this paper.

R.N. Kumaran, *et al.*, *Man and Environment* XXXVII(1): 96-101 [2012]
ME-2012-1A11



Volume XXXVII, No. 2 (July-December 2012)

Exploring the Past: Frameworks of Conceptual Constructs

S.C. Malik

S.C. Malik, *Man and Environment* XXXVII(2): 1-6 [2012]
ME-2012-2A01

Revisiting the Bellan-bandi Palassa Human Remains of the Mesolithic Period, Sri Lanka

Kanthilatha, W.S.P.Y.N, S.G. Yasawardane, Gamini Adikarie, W.E. Boyd and M.M. Pathmalal

The Mesolithic site of Bellan-bandi Palassa in Sabaragamuwa Province, Sri Lanka was occupied around 10,000 BP years ago. Analysis of the skeletal remains, excavated between 1953 and 1970, provides an opportunity to understand the anatomy of these Mesolithic people. Based on partial and complete mandibles, there are a minimum of fifteen individuals in the collection. The calculated mean stature, using fragmented long bones, is 140.05 ± 4.21 cm. The cusp and groove patterns of the teeth of adult mandibles were not observable, indicating high incidence of attrition, possibly due to a high sand content in the diet. The size, weight and thickness of the mandibles, and the form and projection of the chin, indicate that the remains belonged to both sexes, while the eruption pattern of teeth and the position of the mental foramen reveal that they belonged to the sub-adults and older adults category. The well-developed enlarged supra-orbital ridges, wide face-to-head breadth ratio, large palate, and mental foramen are suggestive of dolichocephalic skull type. The presence of similar morphological traits in both the Mesolithic Balangoda people examined here and documented for the contemporary indigenous Veddas/Vaddas people of Sri Lanka does suggest close genetic affinities.

W.S.P.Y.N Kanthilatha, *et al.*, *Man and Environment* XXXVII(2): 7-17 [2012]
ME-2012-2A02

Petrography of Ceramics from Bhirrana: A Preliminary Study

K. Krishnan, L.S. Rao, V. Vinod, Smitha S. Kumar, Prabhin Sukumaran, and Dilip Kumar Kushwaha

Representative samples recovered from excavations at Bhirrana, Haryana were subjected to the hardness test, porosity study, and thin-section analysis. From the study it appears that at least three sources of raw materials were initially exploited and after the Hakra phase one source was completely discarded. The study further revealed that there were a few ceramic

workshops/ workshop complexes at Bhirrana. Textural analyses indicate that different paste recipes were used for making different types of vessels.

K. Krishnan, *et al.*, *Man and Environment* XXXVII(2): 18-27 [2012]
ME-2012-2A03

Explorations in District Banaskantha, Gujarat

Jitendra Nath and R.N. Kumaran

Archaeological explorations were carried out in Banaskantha district along the River Banas and Balaram partly in the talukas of Amirgadh, Dantiwada, Deesa, Dhanera, Iqbalgadh, Palanpur and Shihori. The details of the intensive explorations have been discussed here. The archaeological explorations yielded 97 sites of Mesolithic to Late Medieval period.

Jitendra Nath and R.N. Kumaran, *Man and Environment* XXXVII(2): 28-40 [2012]
ME-2012-2A04

Investigations at Antroli: A Late Harappan Site and Maritime Archaeological Exploration in the Coast of Navibandar, Saurashtra, Gujarat

A.S. Gaur, Sundaresh and Sila Tripathi

In an effort to thoroughly document archaeological sites along the Saurashtra Coast (before they vanish due to rapid developmental activities), a protohistoric site located at Antroli near Madhopur was chosen to assess the earliest antiquities of the region. Our investigation revealed habitation deposits of two periods – the 2nd millennium B.C. and the Early Medieval period. The antiquities indicate that this coastal site might have been a fishing village during the protohistoric period. Coastal explorations at Navibandar yielded the remains of an ancient jetty, road, and bullock-cart marks, besides a composite type of anchor.

A.S. Gaur, *et al.*, *Man and Environment* XXXVII(2): 41-49 [2012]
ME-2012-2A05

Preliminary Report on Excavations at Kholapur, District Amravati, Maharashtra

B.C. Deotare, Gurudas Shete, Reshma Sawant and Satish Naik

Excavations (2008 and 2009) carried out at the Early Historic site of Kholapur, District Amravati, Maharashtra, have brought to light new features like agriculture-based food economy and multi-cultural continuous occupation in the Purna basin during the Early Historic period. The site is located in the saline tracks of middle Purna and spread over an area of more than 50 ha with some intact mounds yielding occupational deposit up to 3.5 m. The recovery of archaeobotanical remains was significant. Although, sites like Tuljapur Garhi, Kaundinyapur and Paturda are equally important within the archaeological framework, but the sites of Kholapur and Bhon now assume greater significance in the light of agricultural practices adopted, like well and canal irrigation, during the Early Historic period of this region.

B.C. Deotare, *et al.*, *Man and Environment* XXXVII(2): 50-59 [2012]
ME-2012-2A06

Faunal Studies at Bhon and Paturda in the Purna Basin of District Buldhana, Maharashtra

Arati Deshpande-Mukherjee and B.C. Deotare

The Vidarbha region of Maharashtra has several protohistoric and historic sites. Although, faunal studies had been carried out at a few sites such as Tuljapur Garhi, Mahurjhari, Bhagimohari, Paunar and Kaundinyapur, they were mostly focussed on the Iron Age/megalithic period. Animal remains in appreciable numbers have been recovered from the Early Historic site of Bhon and Paturda in the Purna River basin of district Buldhana. This paper discusses the results of the faunal analysis carried out for these two sites. The study revealed a diverse range of animals with main emphasis on cattle-based subsistence economy. In addition, hunting and fishing was also carried out to supplement the diet. Besides dietary use of most of the animals, presence of a bone tool industry at Bhon was indicated by the presence of a large number of bone tools along with splintered bones in various stages of modification. From the overall faunal remains it has been inferred that, cattle keeping might have provided great support for agricultural activities in the Purna River basin in the past.

Arati Deshpande-Mukherjee and B.C. Deotare, *Man and Environment* XXXVII(2): 60-70 [2012]
ME-2012-2A07

Islands in Rann

Shereen Ratnagar

Since the exploration by R.S. Bisht, Mardakh in the Little Rann of Kachchh has emerged as a likely source of Harappan bead stones. The geography and land use of the Little Rann, an area not well documented even today, have been outlined. Higher sea levels need to be taken into account while considering its potential as a source in Harappan times. Overall the argument is that the sources of materials used in the past are not as obvious as some of us have hitherto thought.

Shereen Ratnagar, *Man and Environment* XXXVII(2): 71-80 [2012]
ME-2012-2A08

Aspects of Urbanization in the Upper Ganga Plain: A Review

Sanju Shukla and J.N. Pandey

The paper discusses the latest results of archaeological investigations against the concept of urbanization. The authors present a brief introduction of the geographical background of the region, a short survey of the published literature on urbanization, pre-urban settlements, and the role of iron technology in the growth of urbanization has also been dealt with. This is followed by a review of the urban settlements of the Upper Ganga Plain.

Sanju Shukla and J.N. Pandey, *Man and Environment* XXXVII(2): 81-88 [2012]
ME-2012-2A09

An Ethnoarchaeological Study of Shell Fishing and Lime Manufacturing Technique at Manikapatana, Orissa, India

Tilok Thakuria

Preparation of lime from shells by traditional method is carried out in coastal areas of India. Lime is useful for various purposes and one of them is for preparation of plaster. Excavations and explorations at Sisupalgarh and Manikapatana revealed plaster pieces used in construction and flooring. At present, shell fishing is an organized business for preparation of lime by burning shells at Manikapatana. Hence, this paper tries to document ethnographic details of shell fishing, traditional method of lime manufacture, its uses and archaeological significance of lime use and lime trade during Early Historic and medieval period in Orissa. Besides these, chemical analysis of plaster sample was carried out to find concentration of elements in modern shell and lime plaster discovered from excavation at Sisupalgarh. The study resulted that shell lime was in use during the medieval period for plastering. Sources of dolomite lime stone were exploited by the Early Historic elite people, but shell lime was probably source for preparation of plaster for socially and economically lower class of people.

Tilok Thakuria, *Man and Environment* XXXVII(2): 89-101 [2012]
ME-2012-2A10