

Man and Environment

ABSTRACTS

Volume XXIII, No. 1 (January-June 1998)

From Ordos to the Oxus: the Tokharians and their Odyssey

A.K. Narain

A.K. Narain, *Man and Environment* XXIII(1): 1-17 [1998]

ME-1998-1A01

The Interface of Archaeology and History*

F.R. Allchin

F.R. Allchin, *Man and Environment* XXIII(1): 19-35 [1998]

ME-1998-1A02

Whither South Asian Prehistory?

Brigdet Allchin

Brigdet Allchin, *Man and Environment* XXIII(1): 37-44 [1998]

ME-1998-1A03

Rediscovering the Janapada Punch-Marked Coins of Early Historic India

Dilip Rajgor

This is the first time that an extensive classification has been carried out for the lesser known Janapada Punch-marked coins of Pre-Mauryan India. This preliminary paper is based on extensive fieldwork carried out from 1992 to 1994 throughout the country, during the course of which nearly 10,000 Punch-marked coins were photographed and studied. Apart from this, thirty published coin hoards and thirty-odd unpublished coin hoards were also studied. All these data were finally classified and the coin series attributed to their respective Janapadas.

Dilip Rajgor, *Man and Environment* XXIII(1): 45-62 [1998]

ME-1998-1A04

Shellfishing and Shell Crafts during the Harappan Period in Gujarat

Arati Deshpande-Mukherjee

The earliest direct evidence for the utilisation of molluscan shells by human beings for various purposes comes from the Upper Pleistocene. In Indian archaeology, however,

Malacology was, till recently a neglected subject. However, in the past two or three decades there has been an increasing awareness among archaeologists concerning molluscan shell studies, resulting in some important work on the Harappan sites, especially in Gujarat. In this paper, I have tried to compile data from published sources as well as included my own observations on shells from nine Gujarat Harappan sites. The study has revealed that shells were mainly utilized for food as well as in the shell industry. A more or less uniform pattern of molluscan exploitation is exhibited at these sites. The Harappan shell industry in Gujarat resembles that of Mohenjo-daro and Harappa in many respects. Seasonal harvesting of estuarine bivalves and gastropods at coastal sites contributed marginally to the food economy of the Harappans. Besides, the presence of certain habitat specific species has revealed that the micro-environment in the area comprised intertidal mud flats, mangrove swamps, etc.

Arati Deshpande-Mukherjee, *Man and Environment* XXIII(1): 63-80 [1998]
ME-1998-1A05

Surface Wash Processes and their Impact on Stone Age Sites

Richa Jhaldiyal

In semi-arid regions the erosional process of surface wash causes the removal of sedimentary cover and is responsible for the exposure of the Stone Age artefact horizons to the surface so that their post-burial and pre-re-exposure context becomes compromised by contemporary slope processes. In order to understand the nature of the impact of surface wash processes of sheet and rill erosion on exposed Acheulian artefacts on gentle or low gradient slopes, an observational study was conducted in the Hunsgi and Baichbal basins (Karnataka). This has shown that while slope angle, artefact size and location of the artefact on a planar versus a rilled surface clearly influence the rate of displacement, other factors like proximity to sediment source and the location of discard of artefacts on the slope will also determine the rate of downslope movement.

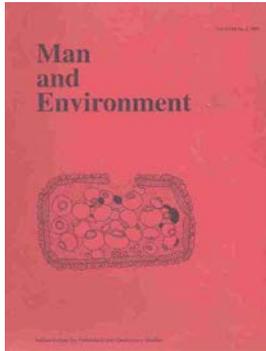
Richa Jhaldiyal, *Man and Environment* XXIII(1): 81-91 [1998]
ME-1998-1A06

Archaeology of the South Arcot Region with Special Reference to Megalithic Burial Complexes

K. Rajan

Recent archaeological explorations have revealed different cultural traits that percolated through different geographical zones. Interestingly each zone had a distinct megalithic trait — cairn circle, urn burial and sarcophagus — and each of these three zones was occupied by a separate clan group during the Sangam period. Anthropomorphic figures and rock engravings, the first of this kind in Tamil Nadu were noticed in this region. Paintings on rock shelters reflect the pastoral economy.

K. Rajan, *Man and Environment* XXIII(1): 93-105 [1998]
ME-1998-1A07



Volume XXIII, No. 2 (July-December 1998)

Vangasari: a Mesolithic Cave in the Eastern Ghats, Andhra Pradesh

P. Vijaya Prakash

Mesolithic cultural evidence, though profuse in the coastal plains on the east coast of India, is scanty in the hill tracts of the Eastern Ghats, which run adjacent to the plains and almost parallel to the east coast. Among a few Mesolithic sites discovered a small cave at Vangasari (VGSR-C1) is the richest not only in terms of the number of microlithic tools (3157), their concentration in an 18 sq m cave floor area, but also the associated cultural objects like saddle querns, a ringstone, hood-stones, and semi-fossilised bone pieces. The statistical analysis and the frequency distribution of the tool types against their place of recovery (18 sq m blocks) have shown the spatial organisation of tool fabricating spots in the cave itself.

P. Vijaya Prakash, *Man and Environment* XXIII(2): 1-16 [1998]
ME-1998-2A01

A Preliminary Analysis of Microblades, Blade Cores and Lunates From Watgal: A Southern Neolithic Site

Ann S. DuFresne, Jim G. Shaffer, M.L. Shivashankar and Balasubramanya

Microblades, blade cores, and lunates from Watgal, a stratified Southern Neolithic site in Raichur District (Karnataka), were studied in an attempt to identify temporally-linked differences. Techniques of manufacturing these artefacts at Watgal remained relatively consistent for more than a millennium. Quantitative methods were used to identify subtle changes through time in microblades and lunates. With some exceptions, these changes seem to indicate a trend towards standardization within the site's chipped-stone assemblage.

Ann S. DuFresne, *et.al*, *Man and Environment* XXIII(2): 17-43 [1998]
ME-1998-2A02

The Impact of Geomorphological Changes on Archaeological Sites: Isunuru, a Vanishing Megalithic Site on the Godavari River

P. Vijaya Prakash and K. Gopikrishna

Archaeological sites on the banks of rivers are subject to fluvial erosion, e.g. Megalithic Isunuru. The study of such sites can be used to understand the timing and occurrence of

episodes of enhanced fluvial activity. Fluvial dynamics responsible for the destruction at Isunuru include the development of a point-bar with lateral shifting of the river channel.

P. Vijaya Prakash and K. Gopikrishna, *Man and Environment* XXIII(2): 45-50 [1998]
ME-1998-2A03

Megaliths in the Upper Palar Basin, Tamil Nadu — a New Perspective

S.B. Darsana

This paper is based on a systematic study of megalithic burials in the Upper Palar Basin (northern Tamil Nadu), as well as on recent theoretical and methodological approaches in field archaeology. Since both typological and chronological aspects of the megalithic culture have already been studied in detail, an attempt has been made here to look into other problems such as understanding the functional significance of the burial monuments in society, assuming that there is no need to erect huge stone monuments for the simple task of disposal of the dead. Ancient Tamil literature the early centuries of the Christian Era has been used as a tool to interpret the archaeological evidence.

S.B. Darsana, *Man and Environment* XXIII(2): 51-64 [1998]
ME-1998-2A04

Further Excavations at Kodumanal, Tamil Nadu

K. Rajan

The fifth season of the excavations at Kodumanal yielded additional data on the megalithic graves. The cairn circle entombing a transepted cist with a subsidiary cist on the east yielded some interesting grave goods which were not found in the earlier excavations. For the first time a deer burial along with a pot containing etched carnelian beads, a sword and axes was found. The purpose and nature of the porthole are further clarified in this excavation. The graffiti marks on the grave goods conveyed a meaning rather than being merely decorative.

K. Rajan, *Man and Environment* XXIII(2): 65-76 [1998]
ME-1998-2A05

Archaeology of Bet Dwarka Island

Sundaresh and A.S. Gaur

Explorations along the shore and in the intertidal zone at Bet Dwarka island were carried out by the Marine Archaeology Centre of National Institute of Oceanography (NIO), Goa between 1981 -1994. Artefacts of both the protohistoric and historic period were found. The former include a seal, inscriptions and pottery, while the latter consist of coins and pottery. The earliest settlement at Bet Dwarka may be dated to the late phase of the Indus

Civilization, i.e. c. 1400 B.C. Bet Dwaraka then was perhaps deserted for several centuries and was re-occupied in the 3rd century B.C.

Sundaresh and A.S. Gaur, *Man and Environment* XXIII(2): 77-86 [1998]
ME-1998-2A06

The Archaeological Significance of Beads and Pendants

Robert G. Bednarik

The archaeological significance of beads and pendants is discussed from the point of view of the cognitive evolution of humans. Evidence is discussed for the presence of beads from the Acheulian period onwards and experimental manufacture of ostrich eggshell beads was undertaken.

Robert G. Bednarik, *Man and Environment* XXIII(2): 87-99 [1998]
ME-1998-2A07

Back to the Bones?

Shereen Ratnagar

This paper expresses doubts about the need to investigate the biological origins/affinities of the authors of ancient civilizations, and the way in which it is being done. It also expresses misgivings about recent work which implies that biological characteristics tell us about the history of language.

Shereen Ratnagar, *Man and Environment* XXIII(2): 101-105 [1998]
ME-1998-2A08

Pottery Manufacturing Techniques: the Role of Technical Constraints and Personal Choices

Archana Choksi

Archaeologists tend to conceptualise the prehistoric potter as a person whose output is conditioned by the physical, chemical and economic constraints in which he worked. This paper argues that, while these factors all play a part, it is his wider social environment that plays a major role in shaping his output. Rather than nature, it is culture that accounts for different textures, colours and forms, and for the choices that are made at each stage of production. This argument is illustrated using data from two pottery producing centres in Kachchh. Implications from the ethnographic study for interpreting the archaeological record are discussed.

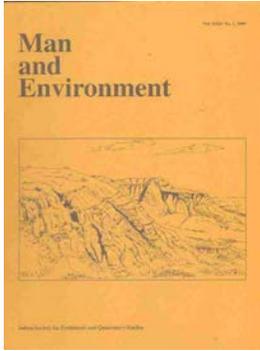
Archana Choksi, *Man and Environment* XXIII(2): 107-118 [1998]
ME-1998-2A09

A Study of the Living Megalithic Culture of the Anals of Manipur

P. Binodini Devi

This paper deals with the Megalithic practices of the Anals of Manipur, one of the eleven Naga ethnic groups. Upright stones are to be seen all over the areas inhabited by the Anals, but very little information about them is available. Here various kinds of megaliths and the ceremonies connected with them are documented based on information collected from the elderly inhabitants.

P. Binodini Devi, *Man and Environment* XXIII(2): 119-125 [1998]
ME-1998-2A10



Volume XXIV, No. 1 (January-June 1999)

Climate and Environmental Change in Low Latitudes: Issues, Challenges and Examples from Quaternary Aeolian Systems

David S.G. Thomas

After outlining reasons for the potentially poor preservation of palaeoenvironmental proxy data in arid areas, the utility of aeolian deposits and landforms in aiding Quaternary palaeoenvironmental reconstructions is considered. Principal data sources are sand seas, which are spatially extensive, and interactive systems, which are more localised. The former have been and continue to be widely used in environmental reconstructions, while the latter have great potential to contribute to robust interpretations. In all cases, the greatest utility is gained when a) palaeoenvironmental interpretations take account of the findings of modern process studies, which allow more realistic interpretation of the controls influencing aeolian processes, and b) chronometric applications are made directly to the deposits being investigated. Issues and problems are exemplified through consideration of recent research in the Kalahari of southern Africa.

David S.G. Thomas, *Man and Environment* XXIV(1): 9-20 [1999]
ME-1999-1A01

Luminescence Dating Results of Dune Profiles from the Margins of the Thar Desert and their Implications

M.P. Chougaonkar, K.S. Raghav, S.N. Rajaguru, A. Kar, A.K. Singhvi and K.S.V. Nambi

IRSL (Infrared Simulated Luminescence) dating of two sand dune profiles on the eastern margin of the Thar using a 950 nm stimulation band indicates three distinct phases of aeolian accumulation centred at 65 kyr, 32 kyr and 16-10 kyr. These are in conformity with the regional data on the climatic record of the Thar and show that the Thar desert is not of anthropogenic origin nor is there any significant eastward advance.

M.P. Chougaonkar, *et al.*, *Man and Environment* XXIV(1): 21-26 [1999]
ME-1999-1A02

Late Holocene Environment and Culture at Bari Bavri, Western Rajasthan, India

Deotare B.C., M.D. Kajale, Sheela Kusumgar and S.N. Rajaguru

The paper deals with the cultural and environmental interpretation of an archaeological site dating to around 500 A.D., preserved under a pebbly-sandy gravel within a wide channel. The archaeological material has been preserved by the armouring effect of the covering gravel, which could not be transported by later floods. This is a typical desert flood deposit of an ephemeral stream near Bari Bavri, emanating from the arid core of Jodhpur District, western Rajasthan. The multidisciplinary approach involving geoarchaeology, palaeobotany, radiocarbon dating, stratigraphy and chemical studies have enabled us to attempt a palaeoenvironmental interpretation of the hitherto less well studied Late Holocene palaeoclimatic history of parts of the Thar desert.

Deotare, B.C., *et al.*, *Man and Environment* XXIV(1): 27-38 [1999]
ME-1999-1A03

Prehistoric Cultures and Late Quaternary Environments in the Luni Basin around Balotra

Sheila Mishra, M. Jain, S.K. Tandon, A.K. Singhvi, P.P. Joglekar, S.C. Bhatt, A.A. Kshirsagar, Sonali Naik and Aarti Deshpande-Muhkerjee

Late Quaternary palaeoenvironments of the Thar desert, have recently been studied as part of a multi-institutional and interdisciplinary project. Detailed geological work has been carried out on the Luni river to understand its response to changing Quaternary climate. In the course of this work a number of prehistoric sites have been dated by luminescence techniques and the palaeoenvironmental framework elucidated. Three phases of prehistoric occupation can be distinguished. An Acheulian handaxe found on the surface of a hill near Bajawa village attests to the presence of man in the region during Lower Palaeolithic times. A gravel, containing flakes, near Karna village has been dated by IRSL (Infrared Simulated Luminescence) to ~80 kyr. A Chalcolithic occupation of a gravel surface at Manawara has been dated by the fine grained TL (Thermoluminescence) method to ~3.4 kyr. This site was covered by a sand dune dated to around 2.9 kyr by GLSL (Green Light Simulated Luminescence) and exposed during the 1979 Luni flood.

Sheila Mishra, *et al.*, *Man and Environment* XXIV(1): 39-49 [1999]
ME-1999-1A04

Evolution of Parabolic Dunes: a Case History from the Eastern Fringes of the Thar Desert, Rajasthan, India

K.S. Raghav and A.K. Sinha

Parabolic dunes are associated with barchan, linear and transverse dunes. They occur in varied physiographic settings with different conditions of sand supply, wind regime and

rainfall. They belong to different aeolian episodes ranging from older fixed parabolic to active parabolic dunes. Grain size and moisture content of the soil are locally significant in the stabilisation of the dunes. The substratum, topography, availability of sand and prevailing wind speed and direction also play an important role in the formation of parabolic dunes.

K.S. Raghav and A.K. Sinha, *Man and Environment* XXIV(1): 51-61 [1999]
ME-1999-1A05

Quaternary Geology and Stratigraphy of the Shergarh–Dechu Sub-Basin Along the Eastern Margin of the Thar Desert, Rajasthan, India

S.K. Wadhawan

The Shergarh–Dechu sub-basin occurs along the eastern margin of the Thar desert and forms the western parts of Jodhpur District, Rajasthan. Episodic multi-phase aeolian deposits are distinguished resting disconformably over fluvio-aeolian and calcretised colluvio-fluvial units in the basin. Presently four major lithostratigraphic formations have been defined. The Quaternary lithostratigraphic framework, with details on litho-contents, boundaries and relationships with the overlying and underlying formations are enumerated. This synthesis provides for morpho- and climato-stratigraphic interpretations.

S.K. Wadhawan, *Man and Environment* XXIV(1): 63-75 [1999]
ME-1999-1A06

Micromorphology and Geochemistry of Late Neogene-Early Quaternary Ferricretes, Jaisalmer Basin, Rajasthan

Hema Achyuthan

Ferricretes in the Jaisalmer Basin have been formed over the marine Middle Jurassic to Upper Eocene rocks. In this paper these ferricretes have been studied in detail using micromorphology and geochemical analyses. These analyses indicate that they have been formed by the complex processes of pedogenesis and groundwater fluctuations since the Neogene-Quaternary period.

Hema Achyuthan, *Man and Environment* XXIV(1): 77-90 [1999]
ME-1999-1A07

Luminescence Chronology of Holocene Sediments from Taipingchuan in the Loess/Desert Transitional Zone, China and its Implications

Zhong-Ping Lai, A.K. Singhvi, Hui-Zhong Chen and Wei-Jian Zhou

The loess/desert transitional zone in China is an ideal area to study the timing and amplitude of changes in past climates and associated geomorphic processes. Minor perturbations in atmospheric circulation, viz. changes in the intensity of the winter and summer monsoon, results in regionally extended changes in geomorphic processes. We report here Optically Stimulated Luminescence (OSL) dating, including Green Light Stimulated Luminescence (GLSL) and Infra-red Stimulated Luminescence (IRSL), of loess-desert sections at Taipingchuan as well as a lacustrine sequence at Midiwan which has been dated by radiocarbon and studied for its pollen records on palaeoclimate change. IRSL dating of samples from the Midiwan section show good agreement with calibrated ^{14}C dates, and confirm that the horizon can be placed between 11 and < 14 kyr which may correspond to the Younger Dryas event. The present study also brings out several large amplitude arid excursions during the Holocene.

Zhong-Ping Lai, *et al.*, *Man and Environment* XXIV(1): 91-97 [1999]
ME-1999-1A08

Radiolarian Monsoonal Index *Pyloniid* Group Responds to Astronomical Forcing in the Last ~500,000 Years: Evidence from the Central Indian Ocean

Shyam M. Gupta

Pyloniid radiolarians, oceanic micro-zooplanktons (surface water dwelling), are sensitive to monsoon sea surface temperature and salinity, and their variation down a core may provide an insight into the proxy climatic changes in the tropical Indian Ocean. In the present study, the *Pyloniid*'s percentage distribution at ~5 kyr intervals during the last ~500kyr (+10 kyr) years exhibited sinusoidal changes in biostratigraphically dated sediment core (AAS-2/3; 7.49⁰ S, 80.01⁰ E, water depth ~5463 m) from the central tropical Indian Ocean. Characteristics of *Pyloniid* Variation in time suggest several short and long term periodic changes in the proxy monsoonal record. Fourier Transform Spectral Analysis of *Pyloniid* percentages revealed the triplet peaks of the earth's orbital cycles at the eccentricity (405-, 129- and 95-kyr), obliquity (41- and 30-kyr) and precessional (23-, 19- and 17-kyr) bands. The results suggest that the *Pyloniid* group of radiolarians, a proxy index for the southwest monsoon, exhibit cyclic changes at the earth's orbital precession, obliquity and eccentricity cycles in the last 500 kyr.

Shyam Gupta, *Man and Environment* XXIV(1): 99-107 [1999]
ME-1999-1A09

Late Holocene Temporal Patterns of Palaeofloods in Central and Western India

Vishwas Kale

This paper briefly summarizes the evidence of palaeofloods on five large rivers in central and western India. The preliminary synthesis of the palaeoflood data indicates century-scale variations in the flood frequency and a noteworthy clustering of large floods during the late Holocene period. On the basis of modern analogues it appears that the century-scale

variations in flood frequency and magnitude are linked to long-term fluctuations in the monsoon precipitation.

Vishwas Kale, *Man and Environment* XXIV(1): 109-115 [1999]
ME-1999-1A10

Decadal Rainfall Prediction Across India Using Longest Instrumental Records

N.A. Sontakke and Nityanand Singh

Long period rainfall series are vital in studies of climate variability as well as being useful in cross comparisons with climatological proxies such as tree-rings, microorganisms in marine cores, lake sediments, preserved pollens, ice cores, etc. In this paper reconstructed longest instrumental rainfall series are modelled and extrapolated to predict rainfall fluctuations over a 10-yr period (1998-2007) across the country. This study uses summer monsoon rainfall (SMR), post-monsoon rainfall (PMR) and annual rainfall series of northwest India (NWI), north central India (NCI), northeast India (NEI), west peninsular India (WPI), east peninsular India (EPI), south peninsular India (SPI) and relatively plain- and contiguous (REPAC) India (combined area of the stated six zones), and also the rainfall series of each of the four seasons and annual total of north mountainous India (NMI) (combined area of hills of Uttar Pradesh, Himachal Pradesh and Jammu and Kashmir). A brief description of the reconstruction of the different series using optimum observations is provided. Some series have been extended back to 1813, and all are updated up to 1997.

The low frequency smoothed series up to 1997 plus the series 1998-2007, filled with the long term mean is subjected to Variable Harmonic Analysis (VHA). VHA is a modification of classical harmonic analysis. An objective technique is applied to select a few harmonics whose linear combination showed a correlation coefficient of ~ 0.85 with the smooth series. The rainfall amount generated from the selected harmonics would be the prediction for the period 1998-2007. The study provides a tentative inference that rainfall fluctuations across the country are likely to be around the long term mean over the next 10-yr period.

N.A. Sontakke and Nityanand Singh, *Man and Environment* XXIV(1): 117-136 [1999]
ME-1999-1A11

Late Quaternary Environmental Changes and Human Occupation of the Tibetan Plateau

Frank Lehmkuhl, Jürgen Böhner and Frank Haselein

Investigations in the eastern and central part of the Tibetan Plateau have focussed on the environmental changes of the last glacial-interglacial cycle. The reconstruction of the spatial distribution and timing of Pleistocene glaciations and lake level changes is of particular interest. Our research is in agreement with that of others and concludes that during cold phases of the last glaciation, the glaciers were at their maximum extent and periglacial features including large alluvial fans were forming. These periods alternate with periods of high lake levels in most areas of Central Asia. This can be proved by detailed investigations

of the morphological sequences at the lake Nam Co. In areas where the Pleistocene glaciations were less extensive, alluvial fans and traces of higher lake levels can be found. Higher lake levels in the deserts of Central Asia and on the Tibetan Plateau were dated to 40-30 kyr and to late glacial/Early to Mid-Holocene periods when wetter climatic conditions persisted in all probability all over Tibet and Central Asia. The humid conditions also influenced the prehistoric human development on the Tibetan Plateau and adjacent areas. The first evidence of early man on the Tibetan Plateau can be found around 30 kyr. A second phase of human occupation during the Neolithic period is assumed to belong to the early and middle Holocene. This Holocene climatic change can also be deduced from the advances of glaciers, soil development, and pollen analysis. There is climatic change in the Late Holocene towards cooler and in some areas wetter climatic conditions. At present, the Qangtang Plateau (northwestern Tibet) is uninhabited due to modern climatic conditions, which are unfavourable to grassland. This region was used by Mesolithic and Neolithic hunters during the Holocene climatic optimum. Based on present-day July temperature and annual precipitation, a calculation of the Mid-Holocene climatic conditions provides evidence for an enlargement of areas favourable for grazing.

Frank Lehmkuhl, *et al.*, *Man and Environment* XXIV(1): 117-136 [1999]
ME-1999-1A12

Late Quaternary Alluvial History and Archaeological Sites in the Nimar Region of Western Madhya Pradesh, India

Sheila Mishra, S.B. Ota, Gurudas Shete, Sonali Naik, and B.C. Deotare

A number of archaeological sites along the Narmada River in the Nimar region have been studied including Navdatoli, Nawarakheri, Pipri, Utawad, Chilkalda, Khaparkhera and Karondhia. It has been possible to identify a number of geomorphological “events” and to date them in relation to the archaeological sites. These include a phase of Late Pleistocene aggradation, incision and soil formation in the pre-Chalcolithic period, and a post-Chalcolithic phase of aggradation and incision. These changes in the fluvial activity of the Narmada are due to changes in climate. The human settlements also appear to be sensitive to changes in climate.

Sheila Mishra, *et.al*, *Man and Environment* XXIV(1): 149-157 [1999]
ME-1999-1A13

Studies in the Geomorphology, Quaternary Palaeoenvironments and Archaeology of the Vel River, a Tributary of the Bhima in Western Maharashtra

Sheila Mishra, Sonali Naik, Utpala Adhav, Sushama G. Deo and S.N. Rajaguru

The Vel river is a tributary of the Bhima with most of its catchment in the semi-arid zone in Upland Western Maharashtra. It has preserved geomorphic and archaeological features throwing light on tectonic, climatic and archaeological history since the Neogene. In this paper we argue that denudational surfaces, high level gravels (HLG), weathered bedrock and

the bedrock incised channel seen in the Vel basin around Talegaon Dhamdhere are relict features of the landscape. A series of aggradational episodes have been dated to around 10 kyr, 7 kyr, 2.5 kyr and 200 yr bp. The episodic aggradational activity of the Vel dates primarily to the Holocene while the trunk stream, the Bhima, was in an incisional mode during the same time period. We suggest here that this different behaviour during the same time is caused by different basin characteristics of the two rivers. Archaeological material is associated with all the aggradational episodes. Microlithic industries are associated with both the 10 and 7 kyr gravels, while Late Chalcolithic pottery is found at 2.5 kyr and a Maratha period temple at 200 yr bp.

Sheila Mishra , *et.al*, *Man and Environment* XXIV(1): 159-166 [1999]
ME-1999-1A14

Geoarchaeology of the Acheulian Workshop at Isampur, Hunsgi Valley, Karnataka

K. Paddayya, Richa Jhaldiyal and Michael D. Petraglia

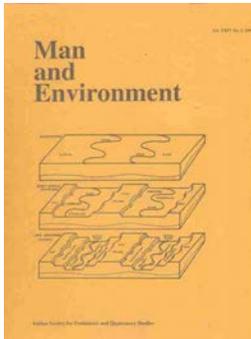
This paper presents an up-to-date account of 3 seasons of field work (1997, 1998, 1999) conducted at the Acheulian site near Isampur in the Hunsgi Valley. The results of this field research comprising explorations, mapping of surface features, contour survey and excavations include: a) identification of a shallow palaeodrainage tract on the western edge of which the site is located; b) recognition of variability in the preservational contexts of the Acheulian level ranging from fluvially rearranged ones through ones partially altered by past and contemporary land modification processes to *in situ* or primary contexts; c) a comprehensive understanding of the lithic reduction sequences; and d) recognition for the first time of the stratigraphical context of the Middle Palaeolithic culture of the region.

K. Paddayya, *et.al*, *Man and Environment* XXIV(1): 167-173 [1999]
ME-1999-1A15

The Sub-Andean Loess of Northwest Argentina: a Concise Review

Edward Derbyshire

Edward Derbyshire, *Man and Environment* XXIV(1): 185-190 [1999]
ME-1999-1A16



Volume XXIV, No. 2 (July-December 1999)

The Transformation of the Indus Civilization

Gregory Possehl

Suggested explanations for the “eclipse” of the Indus Civilization (2500-1900 B.C.) are reviewed, along with a description of the culture history that accompanies the abandonment of Mohenjo-daro and many other Mature Harappan settlements. New data are presented from Mohenjo-daro which suggest that the process of change that brought about the eventual abandonment of the site began in the later part of the third millennium B.C. Settlement data from the ancient Sarasvati River, Gujrat, and northwestern India that suggest that there was no general “eclipse” but a process of deurbanization and a shift eastward in the general distribution of the population.

Gregory Possehl, *Man and Environment* XXIV(2): 1-33 [1999]
ME-1999-2A01

The Prehistoric Indus River System and the Indus Civilization in Sindh

Louis Flam

Aerial photo composites and field research have revealed a number of post-Pleistocene fluvial remnants associated with former courses of the Indus River in the Lower Indus Valley (Sindh, Pakistan). Geomorphic and historical evidence are used to connect fluvial remnants and delineate former Indus River courses from northern Sindh to the Arabian Sea. The Sindhu Nadi is recognized as the prior course of the Indus River during the fourth and third millennia B.C. For this time period, a second perennial river, the Nara Nadi, is delineated in the eastern portion of the Lower Indus Basin, with the prehistoric coastline located in a more northerly area than that of the present day. Several implications and dynamics of ancient river course locations are suggested for the prehistoric Indus Civilization (c. 2600-1900 B.C.)

Louis Flam, *Man and Environment* XXIV(2): 35-69 [1999]
ME-1999-2A02

On the Nature of the Indus Seals: Problems and Prospects

P.V. Pathak

Although several hundred attempts have been made by both professionals as well as amateur researchers of very varied backgrounds to decipher the Indus script, very few, out of the more

than 2,500 Indus seals and sealings have been deciphered or understood in their proper background. The author attempts to analyse and understand the iconography of the seals rather than decipher the Indus script. He has also reviewed the work on seal decipherment. In addition his own interpretation of these legend seals as the pictorial representations of the Atharva Vedic (AV) hymns has been discussed.

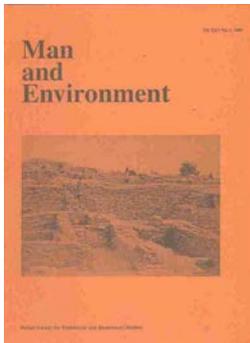
P.V. Pathak, *Man and Environment* XXIV(2): 71-77 [1999]
ME-1999-2A03

Significance of a Bead Manufacturing Centre at Mahurjhari, district Nagpur, Maharashtra, India

R.K. Mohanty

The various processes involved in bead manufacturing have been reconstructed from the study of manufacturing waste found at the Iron Age and Early Historical Site of Mahurjhari. The Evidence suggests that bead manufacturing was centrally organized, at least during Early Historic times when the recovery of rich cultural material indicates a flourishing economy.

R. K. Mohanty, *Man and Environment* XXIV(2): 79-89 [1999]
ME-1999-2A04



Volume XXV, No. 1 (January-June 2000)

New Archaeology and Vedic Cosmogony

D.N. Tripathi

D.N. Tripathi, *Man and Environment* XXV(1): 1-13 [2000]
ME-2000-1A01

Harappan Civilization as Seen at the Close of the Twentieth Century

J.P. Joshi

J.P. Joshi, *Man and Environment* XXV(1): 15-34 [2000]
ME-2000-1A02

The Late Harappan Cultures: a Reconsideration

Y.M. Chitalwala

Man and Environment XXV(1): 9-20 [2000]
ME-2000-1A01

Yeleswaram Revisited: The Skeletal Record

K.A.R. Kennedy

Skeletal remains of 15 individuals were excavated from 1961 to 1963 at Yeleswaram, an Iron Age megalithic site in Nalgonda District, Andhra Pradesh, India. These were examined by S.S. Sarkar in 1966 and by the present author in 1972 and 1988 at the Department of Archaeology, Hyderabad. Both anthropologists recognized considerable craniofacial diversity within the skeletal series, but they proposed different hypotheses in their interpretations of their morphometric data and determinations of the biological affinities of the Yeleswaram series with other ancient and modern populations. Recent studies of the genetic, developmental and environmental variables operative in craniofacial and craniobasal anatomy throw new light upon these issues. The present author concludes that the Iron Age people, who inhabited Yeleswaram during the final centuries of the first millennium B.C. bear closest genetic ties to other Iron Age, Early Historic and modern populations of

Peninsular India. The search for Yeleswaram ancestral origins elsewhere in Asia and a charting of their migrations into the subcontinent cannot be justified by present-day morphometric analyses and human skeletal biology.

K.A.R. Kennedy, *Man and Environment* XXV(1): 35-57 [2000]
ME-2000-1A03

Early Historic Trade Network in Central and Western Orissa: an Ethnoarchaeological Perspective

Balaram Tripathy

This paper is based on archaeological and ethnoarchaeological investigations carried out in central and western Orissa over three field seasons (1994-1997). It focuses on the trading relationships between inland sites and coastal urban centres during the Early Historic period. In analysing the trade relationships use has been made of archaeological and literary data as well as ethnographic parallels. The 'centre-periphery' model has been used in explaining the trade network. The role of ecosystem in early Historic trade has also been considered. The trade potential of the region has been assessed taking into account natural resources such as mineral, forest wealth and other available data. An attempt has been made to trace trade routes by means of site locations and their cultural remains such as ceramics. Archaeological material from the middle Ganga Valley and eastern India have been compared to that from the study region. The existing land and river trade has also been examined in order to obtain a holistic picture of ancient trade routes and trading relationships.

Balaram Tripathy, *Man and Environment* XXV(1): 59-65 [2000]
ME-2000-1A04

Recent Underwater Explorations at Dwarka and Surroundings of Okha mandal

A.S. Gaur, Sundaresh, P. Gudigar, Sila Tripathi, K.H. Vora and S.N. Bandodkar

Onshore explorations were carried out in Dwarka, Bet Dwarka, Aramda, Kachhigadhi, Okhamadi and Amrapura area. At Dwarka about 1.6 km² area was explored between water depths of 1.5 to 20 m off Samudranarayan temple. Diving was carried out at about 40 locations and 29 buoys were marked with the archaeological findings. Similarly underwater explorations were also undertaken in north and south of the present bet Dwarka jetty at five different locations. Archaeological findings of the exploration in 1998 have been reported in this paper.

A.S. Gaur, *et al.*, *Man and Environment* XXV(1): 67-74 [2000]
ME-2000-1A05

Systematic Surface Survey at the Early Historic Site of Kaundinyapura, India

M.L. Smith

Systematic, intensive surface collection at the 6.5 hectare site of Kaundinyapur in central India provides data to analyse economic activities at a town sized settlements tied to regional

network from the late first millennium B.C. to the early first millennium A.D. The data show a widespread pattern of manufacturing and consumption activities at the site, and that trading activities were likely to have taken place at the household level. The assessment of local regional trading patterns provided a more comprehensive view of the Subcontinent's political economy in the Early Historic period, a time of increasing social complexity and long-distance exchanges.

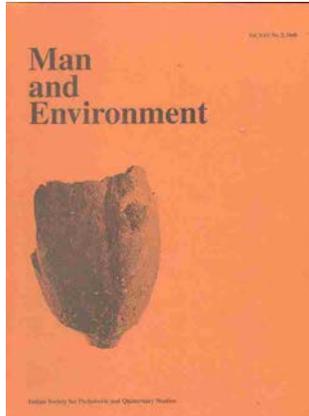
M.L. Smith, *Man and Environment* XXV(1): 75-87 [2000]
ME-2000-1A06

South Asian Photographs in the University of Cambridge Museum of Archaeology and Anthropology

Sudeshna Guha

The University Museum of Archaeology and Anthropology has a large photograph collection which is being systematically documented at present with a grant from the Heritage Lottery Fund (U.K.). The history of this collection stretches back to the 1860s and is related to the establishment of the disciplines of archaeology and anthropology in the University. This short essay details some of the aspects of the south Asian photographs in the collections.

Sudeshna Guha, *Man and Environment* XXV(1): 89-96 [2000]
ME-2000-1A07



Volume XXV, No. 2 (July-Dec 2000)

A Review of Palaeolithic Culture in India with Special Reference to the Neolithic Culture of Kashmir

K. N. Dikshit

K.N. Dikshit, *Man and Environment* XXIV(2): 1-5 [2000]
ME-2000-2A01

Studies in the Beginning of Harappan Civilization at the End of the Millennium

S.P. Gupta

S.P. Gupta, *Man and Environment* XXIV(2): 7-11 [2000]
ME-2000-2A02

Palaeochannels in the Lower Mahi Rier Basin, Gujarat

Rachna Raj, M.B. Wadi, D.M. Maurya and L.S. Chamyal

Palaeochannels in the pediment and the basin zones of the lower Mahi basin in the Central Gujarat alluvial plains were identified and mapped using topographic, geomorphic and sedimentary traces. Depressed areas extending in NE-SW directions were identified as palaeochannels. The sedimentary record points to existence of an ephemeral system controlled partly by syn-sedimentary tectonics. The role of climate and sea level change appears negligible in the avulsion of palaeochannels. Rather, differential uplift along basin faults and the generation of relief in the uplands led to the formation of present-day channels during the early Holocene.

Rachna Raj, *et al.*, *Man and Environment* XXIV(2): 13-18 [2000]
ME-2000-2A03

A Fresh Look at the Human Skeletal Remains from Chalcolithic Walki (Maharashtra)

Veena Mushrif and S.R. Walimbe

Fourteen human burials were recovered during small-scale archaeological excavations undertaken at the Chalcolithic site of Walki. This skeletal series was earlier described in brief by the first author. This is the full and final report of the anthropological investigations carried out on this collection.

The Deccan Chalcolithic skeletal series is over represented by sub-adult segment of the population. Detailed description of the osseous remains in demographic and pathological perspective is necessary for better understanding of the nature of biological adaptations in response to the changes in subsistence strategies. Poor preservation precludes any comment on the phenotypic affinities of this population. However, evidence of skeletal and dental pathologies, like porotic hyperostosis, Harris lines, developmental dental defects, caries, etc. is noteworthy.

Veena Mushrif and S.R. Walimbe, *Man and Environment* XXIV(2): 19-33 [2000]
ME-2000-2A04

An Ethnoarchaeological Study of Copper/Brass Working in Rajasthan, Western India

Kuldeep K. Bhan, Nikita Mehta and K. Krishnan

This paper discusses the copper/brass casting workshop at Dariyawad and medieval copper smelting site of Anjani in Rajasthan, Western India. The study was a preliminary attempt to record a wide set of data about this traditional specialized craft as well as to document the sequence of production and major craft indicators and discernible archaeological patterns before it is completely transformed by technological changes and the introduction of modern socio-economic relationships.

Kuldeep K. Bhan, *et al.*, *Man and Environment* XXIV(2): 35-49 [2000]
ME-2000-2A05

Clay Storage Bins in India: An Ethnoarchaeological Study

Shahida Ansari

Ethnographic studies have contributed to understanding many aspects of archaeological studies in recent times. The present study is an attempt to formulate an ethnographic model for clay storage bins through research among the primitive communities of the Kols and Musahars of Allahabad District, Uttar Pradesh. Technological details like the tempering material used, manufacturing details for platforms and storage bins along with their typological variation and the designs and decorative motifs used are discussed. A unique storage facility i.e., wall-storage has been studied in detail. This paper also reviews evidence of storage facilities in the form of platforms, bins, jars and pit silos from Mesolithic period onwards reported from excavated site. Lastly, various issues related to the varied

requirements of storage and the technological details, which facilitated storage in different contexts are discussed.

Shahida Ansari, *Man and Environment* XXIV(2): 51-78 [2000]
ME-2000-2A06

An Ethnographic Account of Contemporary Shellfish Gathering on the Konkan Coast, Maharashtra

Arati Deshpande-Mukherjee

The collection of molluscs or shellfish like clams, mussels, oysters and gastropods for food can be traced far back as the middle Pleistocene times. In India, although there is archaeological evidence for molluscan use, our understanding remains fairly inadequate. Therefore, with the growing emphasis on actuality, experimental and ethnoarchaeological studies, observations were made on present day shellfish gathering on the Maharashtra coast. This study has helped gain an insight into various facets of use of shellfish such as collection, seasonality, processing, discard behaviour, etc. Further, it has been also possible to document modern shell formation as well as its destruction. The findings from this study will be useful for interpreting the Indian archaeological shell record.

Arati Deshpande-Mukherjee, *Man and Environment* XXIV(2): 79-92 [2000]
ME-2000-2A07