



**National Seminar**  
on  
**ROCK ART RESEARCH IN INDIA**  
2<sup>nd</sup> - 4<sup>th</sup> May, 2019



**Indira Gandhi National Centre for the Arts**  
**New Delhi**



**National Seminar**  
**on**  
**Rock Art Research in India**

**(2<sup>nd</sup> – 4<sup>th</sup> May, 2019)**



**INDIRA GANDHI NATIONAL CENTRE FOR THE ARTS (IGNCA)**  
**NEW DELHI**

# National Seminar

on



## Rock Art Research in India

(2<sup>nd</sup> – 4<sup>th</sup> May, 2019)

This Brochure has been prepared on the occasion of  
National Seminar on Rock Art Research in India

By

Indira Gandhi National Centre for the Arts, New Delhi

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### Credits / Support

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Member Secretary, IGNCA

### Edited By

Dr. B. L. Malla

2019



Organised by

**Indira Gandhi National Centre for the Arts, New Delhi**



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## **Indira Gandhi National Centre for the Arts (IGNCA)**

The Indira Gandhi National Centre for the Arts (IGNCA) is visualized as a autonomous centre encompassing the study and experience of all the arts-each form with its own integrity, yet within a dimension of mutual inter-dependence, inter relatedness with nature, the social structure and cosmology.

This view of the arts, integrated and essential to the larger matrix of human culture, is predicated upon the role of the arts as essential to the 'integral quality of a person, at home with himself and society'. It partakes of the holistic worldview, so forcefully articulated throughout the Indian tradition and emphasized by modern Indian leaders, especially Mahatma Gandhi and Rabindranath Tagore.

IGNCA's view of the arts encompasses a wide area of studies, such as creative and critical literature, written and oral; the visual arts, ranging from architecture, sculpture, painting and graphics to general material culture; photography and film; the performing arts like music, dance and theatre in their broadest connotations; and all else in festivals, fairs and in lifestyles that has an artistic dimension. It is in the Centre's agenda to explore study and revive the dialogue between India and other countries of the world, in areas pertaining to the arts.

The uniqueness of IGNCA's approach to the arts lies in the fact that it does not segregate the folk and the classic, the oral and written, the aural and the spoken, and the ancient and the modern. Here, the emphasis is on the connectivity and continuity between the various fields that ultimately relate human-to-human and human-to-nature.

IGNCA manifests its academic, research work in its publications, international and national seminars, conferences, exhibitions and lecture series. Schools and other educational institutions are within the focus of the outreach programme of the IGNCA.

To fulfill the objectives outlined in the conceptual plan of IGNCA and its principal aims, its functions are organized through five divisions that are autonomous in structure but inter-locked in programming.

The Kala Nidhi Division comprises a Reference Library of multi-media collections, which includes printed books, slides, microfilms, photographs and audiovisual material, a conservation laboratory, a multi-media unit and the Cultural Archives.

The Kala Kosha Division undertakes fundamental research and investigates the intellectual traditions in their dimensions of multi-layers and multi-disciplines. As a

research and publication division, it endeavors to place the arts within the integral framework of a cultural system, combining the textual with oral, the visual with the aural and theory with practice.

Janapada Sampada Division complements the programmes of Kala Kosha. Its focus shifts from the text to the context of the rich variegated heritage of the rural and small-scale societies. Its activities focus on the lifestyle study programmes comprising the *Loka Parampara*, which revolves around a community, and the *Kshetra Sampada*, which revolves round a region. The Adi Drishya Department is mandated to study and experience the ancient worldview through its different art forms and associated subjects.

The Kala Darshana Division provides a forum for inter-disciplinary seminars, exhibitions and performances on unified themes and concepts. The Cultural Informatics Laboratory (CIL) acts as a focal point for digitization of rare manuscripts, books, photographs, slides and audio-visual collection, not only of IGNCA but also of other organisations working in the Department of Culture.

The Sutradhara Division provides administrative, managerial and organizational support and services to all the other divisions. It has a well developed Media Centre for audio-visual documentation and film-making; Cultural Informatics Lab for production of CD-ROMs, DVDs and developing National Digital Data Bank on culture.

### **Contributions to Rock Art Studies by IGNCA**

Rock art study is an emerging discipline in India. IGNCA has initiated many projects/programmes for its study, research and its outreach. A number of Survey and Pilot Study programmes are being organised as a part of IGNCA's National Project on Rock Art of India to encourage the scholars and students to work in this emerging discipline and keep them updated on the status of rock art research in a global perspective and to encourage Indian scholars to take up this new discipline very seriously as it is directly related to the primeval vision of man and is perhaps the first creative act of human being. Its proper study can take our civilization thousands of years back.

IGNCA under its programme *Adi Drishya* (primeval vision of man) has initiated field documentation at national level for preserving the rock art sites/data, which are otherwise prone to human vandalism and natural factors beyond one's control. While recognizing the importance of rock art for the present generation and posterity, the phase wise field documentation has been planned in different States of India with rock art concentration. The main objective of the project is to make textual, contextual, video-photo documentation and communicate with people in the hinterland for archaeological research, and to build up a bio-cultural map, a mental and ecological



atlas of the rock art landscape on the basis of documentation of related folklore and natural and manmade features. Based on this research and documentation etc., the publications are being brought out both in print and electronic media.

As a part of its outreach programme, IGNCA is organising different programmes for capacity building like organization of special lectures, memorial lectures and orientation workshops for researchers and university students; for creating general awareness among the school/college students and the public at large; temporary and mobile exhibitions, children workshops are being organised at the international/national/state levels. General awareness workshops are also being organised at tehsil/block levels for the local administration and for the community members around the rock art sites.

The impact of the projects/programmes launched and undertaken by IGNCA is immense and overwhelming. It can be assessed by the responses of the children, scholars and general public participating in these programmes/events throughout India. The reviews in professional journals and its wide coverage in both print and electronic media (national/vernacular) are quite encouraging. Some of the universities have started taking up the subject very seriously. Briefly, the goal to be set is not merely the development of a database and multimedia gallery/displays but also to establish Adi Drishya into a school of thought and research on alternate means of understanding prehistoric art. For achieving all these goals, the outreach/general awareness programmes, inventorisation and interpretation research of rock art are going on hand in hand.







## Concept Note

Art gives a visibility of one's beliefs that is non-tangible and plays a cardinal role in constructing human endeavour for successful survival. A belief when perpetuated through time gives rise to cultural traditions which enables one to resolve his areas of agonies and ecstasies. Oral traditions and a complex series of rituals are maintained through this articulation in pre-literate societies. So, rock art is the only doorway to enter man's world of feelings.

In the world, Rock art is one of the richest culture resources that depict the earliest expressions of humankind. This prehistoric art perhaps comes to signify the underlying philosophies and worldview of ancient people. This represents the soul of a community and its thoughts, beliefs and emotions. The proximity of this art and its affinity with the art of many living communities of the world today makes it all the more significant and valuable. Rock art images can be treated as a source of cultural communication between the past, present and the future. Fortunately, among the world's six major prehistoric rock art concentrations India has one concentration of the Stone Age era (other five places are South-Western Europe, Russia, North Africa, South Africa and Australia). Rock art has been found throughout the country. Central India is so far known for the largest concentration of painted rock shelters. In the Central, Western and Eastern parts of the country rock art is found on the walls and ceilings of these rock shelters. In Jammu & Kashmir, Karnataka and Andhra Pradesh rock art is reported from boulders/rock shelters. Kerala is notable for rock art evidence found in underground caves.

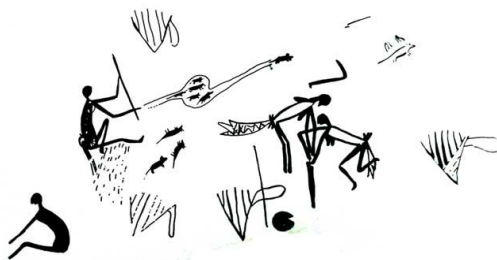
Today Rock art research is a well established discipline in many parts of the world like Asia, Africa, Australia, America and Europe. It is very important to study this aspect of the cultural heritage of human kind in specific countries. Increasing interest in this field has also led to solve some unanswerable question of certain theoretical frameworks of research in rock art. The Indira Gandhi National Centre for the Arts (IGNCA) has conceived a major academic programme, which relates to exploring artistic manifestations emanating from man's primary sense perceptions. The classification of arts in India tradition is based on different primary senses. Amongst the sense that lead to aesthetic experience are vision (*Drishya*) and hearing (*Shravya*). Most probably, man's first awareness of the world around him came through his primeval sense of sight and his ability to hear. This rock art forms a crucial component of the *Adi Drishya* Programme.

The national and international seminars have been organized by IGNCA under its *Adi Drishya* department from time to time to address different aspects related to documentation, conservation and interpretation of Rock Art. In this way, *Adi Drishya* Department will be organizing three days National Seminar on 'Rock Art Research in India' at IGNCA, New Delhi from 2<sup>nd</sup> - 4<sup>th</sup> May, 2019 as a part of the Dr. V. S. Wakankar Centenary Celebration. As we know that the centenary year of *Padmashree* Dr. V. S.

Wakankar (4<sup>th</sup> May 1919 - 3<sup>rd</sup> April 1988), the father of Rock Art studies in India, commenced from May, 2019. Dr. Wakankar was an Indian archaeologist, Epigraphist, Artist and also an expert of Numismatics. From 1954 onwards, he carried out extensive field-work on rock art in India and abroad – Europe, North America and the Middle East. It is estimated that he discovered and documented some 4,000 decorated shelters in India. The most important of his discoveries is Bhimbetka (Madhya Pradesh) in 1957 which has one of the largest concentrations of rock paintings in India. These caves were declared as World Heritage Site by UNESCO in 2003. In this context, this seminar is being planned to access the journey of rock art research in India. A special session for presentations and discussions on the contribution of Dr. Wakankar in the field of Indian Rock Art will be organised. On this occasion IGNCA will also organise an exhibition (2<sup>nd</sup> - 30<sup>th</sup> May, 2019) on The Legacy of Dr. Vishnu Shridhar Wakankar (Hari Bhau).

The deliberations during the proposed seminar may address important issues related to theoretical as well as cultural resource associated with rock art of India, its research, status of conservation, its significance in ethno-archaeological context. Largely, we account for a comprehensive understanding of the occurrence of rock art as a universal phenomenon. Rock art studies require a healthy questioning of theoretical framework that have until now formed unquestioned base for study. In this context, the seminar may throw light on the various aspects of rock art studies in India.

**Dr. B. L. Malla**  
Project Director  
IGNCA, New Delhi





## *Programme Schedule*

### **National Seminar Rock Art Research in India (2<sup>nd</sup> – 4<sup>th</sup> May, 2019)**

#### **Venue**

Conference Hall, C. V. Mess Building  
Indira Gandhi National Centre for the Arts  
Janpath, New Delhi

*2<sup>nd</sup> May, 2019*

<b>Registration of Delegates</b>	<b>:</b> 10:30 am
<b>Inaugural Session</b>	<b>:</b> 11:00 am - 12:30 pm
<b>Chief Guest</b>	<b>:</b> <b>Prof. Nageshwar Rao</b> Vice-Chancellor Indira Gandhi National Open University New Delhi
<b>Chairperson</b>	<b>:</b> <b>Dr. Sachchidanand Joshi</b> Member Secretary IGNCA, New Delhi
<b>Welcome Address &amp; Introduction to Seminar</b>	<b>:</b> <b>Dr. B. L. Malla</b> Project Director Adi Drishya Department IGNCA, New Delhi
<b>Keynote Address</b>	<b>:</b> <b>Prof. Susmita Pande</b> Chairperson National Monument Authority New Delhi



# **Inauguration of Exhibition The Legacy Dr. Vishnu Shridhar Wakankar (Hari Bhau)**

**2<sup>nd</sup> May, 2019**

**Inauguration: 12:30 pm - 1:00 pm**

**Lunch: 1:00 pm - 2:00 pm**

## **I<sup>st</sup> Session: 2:00 pm - 5:30 pm**

Remembering André Leroi-gourhan: The South Asian Rock Drawings  
**Maheshwar P. Joshi**

The Elements of Cognitive Neuroscience Behind Ancient Indian Rock Art  
**Ruman Banerjee**

A Pan-Indian Perspective on Rock Art from a Compilation of >1000 Published Sites  
**Parth R. Chauhan, Prabhsimrandeep Kaur**

Patterns in the Geographical Distribution of Rock Art Sites in India  
**Ravi Korisettar**

Symbolism in Rock Art  
**Sadasiba Pradhan**

U.F.O and Alien Depiction in Pre-historic Rock Paintings  
**R. P. Pandey**  
**Mohd. Wasim Khan**

**3<sup>rd</sup> May, 2019**

## **II<sup>nd</sup> Session: 10:30 am - 1:30 pm**

Abstract and Geometric Symbolism in Indian Rock Art: A Reassessment  
**Riza Abbas**

Rock Art and Astronomy: The Missing Link  
**Mayank Vahia**

Rock Art, Literature and Living Tradition in India  
**V. Selvakumar**

The Rock Art of Central India and Awareness in the Young Students and Archaeologist  
**Narayan Vyas**

Sacred Traditions in Central Indian Rock Art  
**Meenakshi Dubey-Pathak**

रीवा-सतना के बोलते-थिरकते शैलचित्र  
**पुष्पेन्द्र कुमार नंदन**

**Lunch: 1:30 pm – 2:30 pm**

**III<sup>rd</sup> Session: 2:30 pm - 5:30 pm**

Management of Painted Rock Shelters at Bhimbetka through Public Participation: Some Suggestions  
**S. B. Ota**

Painted Rock Shelters Around Gwalior  
**S.K. Dwivedi**

Honeycombs in Indian Rock Art and their Manifestations in the Gawilgarh Hills Rock Shelters  
**Nandini Bhattacharya Sahu**

Petroglyphs in the Rock Shelters of Gawilgarh Hills and Odisha: A Comparative Study  
**Prabash Sahu**

Geological Characterization of the Rock Arts of Odisha  
**Devananda Beura**

The Rock Art of Hazaribag: Ethno-Archaeological Analysis (Special Reference to Likhani and Ishko rock shelter)  
**Ganga Nath Jha**

**Sitar Recital by Ms. Smita Nagdev:**

6:00 pm

**Venue:** Auditorium, C. V. Mess, IGNCA  
Janpath, New Delhi

**4<sup>th</sup> May, 2019**

**IV<sup>th</sup> Session: 10:30 am - 01:00 pm**

Eastern Indian Rock Art Sites as Sacred/Ritualistic Spaces: with Special Reference to Southern Bihar and Adjoining Jharkhand  
**Awadh Kishore Prasad**

Rock Art of Kaimur and Rohtas Plateau, Bihar  
**Sachin Kumar Tiwary**

Rock Art Research in Northeast India and Recent Discovery of Non-Figurative Grooved Lines in Neolithic context

**Tilok Thakuria**

Decoding the Engraved Motifs and Figures of Assam and Adjoining Areas

**Dwipen Bezbaruah**

Rock Art in Khoupum Area

**P. Binodini Devi**

Possible Interpretation About the Occurrence of Petroglyphs in Vidarbha Region of Maharashtra

**Kantikumar A. Pawar**

**Lunch: 1:00 pm - 2:00 pm**

**V<sup>th</sup> Session: 02:00 pm - 04:00 pm**

Paradigm Shifts in Rock Art Research Following the Discovery of Bhimbetka and its Impact on South Indian Rock Art

**Jenee Peter**

Rock Art of Kerala: Concord and Contentions

**Ajit Kumar**

Prehistoric Rock Art of Are Gudda (Badami): The Earliest Map in the World?

**Mohana R.**

Scientific Characterization of Pigment used for Paintings in Rock Art of Sonbhadra and Mirzapur, Uttar Pradesh

**Chandra Mohan Nautiyal, S. S. Panda, S. S. Ram, Praveen C. Krishna**

***Panel Discussion and Valedictory Session: 4:00 pm - 5:30 pm***





# Remembering André Leroi-gourhan

## The South Asian Rock Drawings

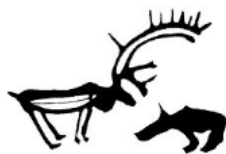
Maheshwar P. Joshi

Although André Leroi-gourhan is noted for his structuralist approach to interpreting the prehistoric European Rock paintings, it is indeed surprising that he is barely remembered for his scholarly contribution to human evolution studies. His 'Birth of Graphism' adds new dimension to the rock drawing studies in the context of language evolution which nowadays archaeologists study under the domain of the emerging field of cognitive archaeology. Since the scope of this paper is exceedingly wide, I will confine it to highlight the importance of 'Birth of Graphism' vis-à-vis rock drawings in studying the language prehistory of South Asia. It will be divided into the following sections.

Section 1: summary account of Leroi-Gourhan's 'Birth of Graphism'; section 2: dispersal of language-using hominins in South Asia post 'Out-of-Africa 1'; section 3: rock drawings in South Asia and the earliest signatures of language; and section 4: concluding remarks: importance of Leroi-Gourhan's formulations in the study of language prehistory.

**Prof. Maheshwar P. Joshi**, b. 1941, is a historian and archaeologist with a Ph.D on temple architecture and iconography and a D.Litt. in numismatics. He is a retired Professor and former Head of the Department of History, Kumaun University, Nainital, Uttarakhand, India, and former member of the Central Advisory Board of Archaeology, Government of India. He is currently an Honorary Fellow of the Doon Library and Research Centre, Dehra Dun (DLRC), Uttarakhand, India, and Collaborator, CNRS, UPR, 299, Villejuif, France. Joshi, who has been actively engaged in research on the Central Himalaya since 1963, has contributed nearly 150 research papers and over fifty articles on Central Himalayan history, culture and archaeology from prehistory to modern times. He has authored four books and jointly edited eleven books, including the Himalaya: Past and Present series of the Association of Studies on the Himalaya (with Dr. Allen C. Fanger and Dr. Charles W. Brown).

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# The Elements of Cognitive Neuroscience Behind Ancient Indian Rock Art

Ruman Banerjee

Indian rock art has been a repository of past life ways of ancient, pre-modern, pre-urban and so called pre-literate communities. However, the cognitive maps of these people have been found reverberated through the depictions of rock art in different parts of India. How the prehistoric people and the ethnic indigenous communities could visualise the complex and mundane details of daily lives and could shape them on the canvasses of the open air rock-shelters by means of rock paintings is still an enigma and relatively unresolved domain. The idea of dimensions and their proper usages through paintings within a given space in the ancient times has been a matter of tremendous curiosity among the rock art researchers, globally. In this paper, I aim to deliberate on the issues of modern cognitive neuroscience and how the methods and models of this discipline might help us to decipher and/or decode the rock art, spread in some major regions of Central India. The genesis of the artistic endeavour in different parts of India is not beyond disputes due to the lack of absolute ages of rock art. However, it can be argued based on expert knowledge, relative dating attempts, stylistics, excavated materials from the painted rock-shelters and a few available absolute dates that figurative, naturalistic art in Central India and perhaps elsewhere precedes the symbolic and/or abstract forms of art. What made this possible? What are the neuro-cognitive bases of this process, which has been either complex to simple and/or simple to complex? Approaching the said issues, I attempt to elaborate on the biological aspects of early hominins who shaped the rock art of their times and made them fundamentally varied and liminal, both structurally and functionally as evidenced by the diversity in Central Indian rock art.

*Dr. Ruman Banerjee, got his degree from the University of Calcutta in Anthropology along with Zoology, Botany and Environmental Science. After the completion of the degree he did M.A. in Ancient Indian History, Culture and Archaeology from Deccan College Pune. He won a scholarship from European Union to do a second postgraduate degree in Prehistory and Quaternary from a few European Universities with mobility period for research work and collaborations. Next, he won another scholarship from Bristol University, which is called Overseas Centenary Research Scholarship and received his doctorate degree on the mapping and uranium series dating of rock art from Central Indian provinces. He was a research associate in the University of Bristol, UK, Department of Archaeology and Anthropology for a year and later he joined IIT Gandhinagar as a postdoctoral research fellow, where he pursues high resolution research on Lithic Technology, Indus Valley Civilization and Cognitive Neuroscience.*

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## A Pan-Indian Perspective on Rock Art from a Compilation of >1000 Published Sites

Parth R. Chauhan  
Prabhsimrandeep Kaur

We present general comparative information based on a compilation of published data from 1062 sites across India, forming the BSc. - MSc. thesis of the second author at IISER Mohali and supervised by the first author. Despite the lack of geo-chronological information, accurate locational data and inconsistent archaeological information, broad thematic and geographic patterns can be observed. At the pan-Indian level, human and animal figures are the dominant themes, respectively followed by war scenes, hunting scenes, geometric/abstract patterns, procession scenes, hand prints and merry-making/celebration scenes. Scenes exhibiting inter-personal violence are unique to central India and largely absent in the south. Extreme dichotomy between male and female figures pronounced in the Mesolithic art of the Vindhya is absent in the south. The Mesolithic paintings in central India do not explicitly show eyes in animal or human figures, but are clearly painted in the south. Depictions of Mesolithic hunting scenes are comparatively sparse in the south. In the Neolithic and Historic depictions of the south, bruising of cattle and cattle hooves dominate whereas in the central India, chariots, horses and procession scenes dominate. Paintings of hunter-gatherers in southern India are succeeded by thematically and stylistically distinct images of Neolithic-Chalcolithic cattle keepers and agriculturists. Such is not the case with the central Indian paintings. In the Historic paintings of Vindhya, drums are the most frequently depicted instrument whereas in the southern Deccan zone, musical instruments have rarely been identified. The quantification (i.e. frequency counts) and associated interpretations presented should be viewed as being provisional and simply for general understanding as all past publications vary in terms of quality, type and detail of the presented data. Indeed, this work demonstrates an urgent need to implement a national standardized protocol/format for reporting and publishing Indian rock art to maintain data consistency and completeness for reliable comparative purposes.

*Dr. Parth R. Chauhan is a Faculty of Archaeology and Palaeo-anthropology in the Department of Humanities and Social Sciences at the Indian Institute of Science Education and Research, Mohali. He has completed his Ph.D. from the University of Sheffield (UK) and his M.A. from Deccan College Postgraduate and Research Institute. His main interests are in Palaeolithic Archaeology and are currently co-directing the Narmada Basin Palaeo-anthropology Project in collaboration with The M.S. University of Baroda. This work includes multidisciplinary research on evidence belonging to all prehistoric phases including stone tools, vertebrate fossils, rock art sites and associated materials such as ostrich eggshell fragments and so forth.*

*Assistant Professor, Department of Humanities and Social Sciences  
Indian Institute of Science Education and Research (IISER)  
Mohali  
Email: parth73@gmail.com*

**Ms. Prabhsimrandeep Kaur** recently completed her integrated BSc. - MSc. Degree from the Indian Institute of Science Education and Research (IISER), Mohali.

*Indian Institute of Science Education and Research (IISER)  
Mohali*



## Patterns in the Geographical Distribution of Rock Art Sites in India

Ravi Korisettar

The historical survey of prehistoric rock art studies in India since Independence reveals the stellar role of the Dr. V. S. Wakankar in placing India as one among the highest top three nations on the planet. The other two are Australia and South Africa. The latter two regions have witnessed great strides in the study of rock art as well as developing new perspectives and approaches in the study of rock art. Although comparable developments have not taken place in India, recent studies of rock art do reveal the application of progressive methods and periodic shift in emphasis as response to developments outside India. My presentation, however, focuses on understanding patterns in the geographical distribution of rock art as a tribute to the Dr. V. S. Wakankar on the occasion of his birth centenary.

Dr. V. S. Wakankar revisited rock art sites discovered during pre-Independence period and opened up the potential of a variety of provinces for rock art studies across the Indian peninsula. He inspired a host of scholars to initiate surveys and documentation, which are continuing till date. Hitherto unexplored regions have proved their potential for rock art research, including identification of a variety of narrative themes as well as geo-referencing of the sites. This we think is as important as the application of advanced methods of interpretation of rock art. Prehistoric rock art ranging in time from the Late Pleistocene to the Iron Age is now known to exist. Pictographs and petroglyphs are two broad categories of prehistoric rock art in India. They are known from a variety of geological/rocky landscapes. An attempt is made to identify patterns in the distribution of rock art and the role of geological formations governing their location.

**Dr. Ravi Korisettar** is currently UGC Emeritus Fellow at the Department of History and Archaeology, Karnatak University, Dharwad, India. His discovery of the Youngest Toba Tuff (YTT), volcanic ash of Sumatra origin, in peninsular river deposits was hailed as a 'great discovery' by the Indian press and its significance in dating the Middle and Upper Palaeolithic has brought the Indian subcontinent at the forefront of debate on expansion of modern humans out of Africa. The hallmark of his work is the successful international collaboration that has secured due place to India in current global debates on peopling of the world.

UGC Emeritus Fellow  
Department of History and Archaeology  
Karnatak University, Dharwad



## Abstract and Geometric Symbolism in Indian Rock Art A Reassessment

Riza Abbas

Among the various iconic and un-iconic forms occurring in rock art of India, abstract and intricate geometric designs are considered to be most enigmatic forms of manifestations. These designs and patterns are usually manifested by tessellating triangles, trapezes, square, rectangles, whorls, loops, herringbone patterns, zigzags, circles, dots, quadrangle, line, open angles and their variants that are complexly interrelated with each other. Neumayer (1993 and 1983) is of view that the intricate patterns are the most notable feature of the early style of Indian rock art and are actually remnant of oversized animals whose bodies were decorated with these patterns. Tyagi (1992) believes that these intricate geometric symbols and their intermediate forms and variants are pre-figurative and finds mystic aspects in these designs and regards them as metaphors of trance experience. Conversely, scholars like Pandey (1969), Wakankar, Brooks (1976) and Mathpal (1984) believe that these designs were meant for decorating the rock shelters as well as animals.

The present paper is a small attempt to classify and compare various intricate and geometric forms occurring in Indian rock art and assess their usage in various forms and themes of rock art manifestations found in various rock art zones. Recent research by the author shows that in rock art these designs are seldom organic (naturally occurring) and are always created using constructed geometric forms and shapes that can be classified as linear, curvilinear and radial patterns. These are generally manifested along with the figurative manifestations or as a part of body decoration of the representational symbology. Many a times their abstracted forms are created by abstracting the most basic and recognizable aspects of geometrical shapes that were often used for creating intricate exemplifications in rock art. These patterns are often visible in biological world as well as can be seen in handicraft work like basketry. It has been noticed that when these intricate patterns are tessellated or patterned in an outlined icon they appear to vibrate or flicker or else create a rippling effect with the movement of the eyes and are therefore capable of giving several illusionary effects which is termed as *moiré effect*. It is also proposed that geometric and abstract depictions were used to add movement effects and induce vivid stereoscopic depth and intensify visual perception. The other reason could be the aesthetic preference of humans towards geometric forms that are also seen capable of producing longer visual fixations and increased activity and stronger responses in the brain of the viewer.

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## Rock art, Literature and Living Traditions in India

V. Selvakumar

Rock Art is an important category of illustrative art represented in remote caves and shelters of India. While the various forms of rock art have been considered as exotic or as having exquisite meanings, a simple look at the associated and contextual evidence of the rock art would reveal that survival of these art forms exist among certain communities and they can be better interpreted by understanding the local, oral traditions, customs and practices. Therefore, it is essential that the documentation of rock art sites should go hand-in-hand with the documentation of the local traditions, ethnography and the communities that actively uses the landscape in which rock art remains are located. The survival of rock art is seen among many of the communities and also their survival is seen in many of the temples in the form of sculptural art. In fact the Pallava temples often had the images of the gods painted in the backdrops and they did not always have the images. The paintings at the Ajanta and many other caves too reveal that humans had a tendency to decorate the plain rock walls of the shelters that they occupied with paintings, perhaps to make it more congenial for living. The images in rock art could be better understood by studying the living traditions, and literature of a particular region. This paper focuses on the importance of oral traditions, living traditions and literature in the understanding and interpretation of rock art.

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## Symbolism in Rock Art

Sadasiba Pradhan

Symbolism is the central theme in all rock art from the upper-Palaeolithic caverns of Franco-Cantabrian region to the early historic rock art in India or Africa. It existed throughout the long epoch of primeval art and reigned supreme towards the close of the pre-historic period. The fact that the same designs and compositions and styles occur repeatedly on the rock surface like the prehistoric implements in an archaeological site and sometimes such designs spread over larger regions, no wonder intercontinental, clearly shows that the makers of rock art world over had something specific in mind to communicate. There is no standard or universally accepted method for decoding these rock art symbols. The paper attempts to decode and interpret some symbols like cupules, bisected triangles, harpoons, palm and footmarks, serpentine, frog, lizard and turtle.

*Prof. Sadasiba Pradhan is an acknowledged scholar of History and Archaeology. He taught for more than 37 years in G. M. College, Sambalpur, P. G. Department of History, Sambalpur University and finally retired in 2015 as Professor and Head of the Department of Ancient Indian History, Culture & Archaeology, Utkal University, Odisha. He was the recipient of the prestigious Charles Wallace British Council Fellowship and the STARR Foundation Visiting Senior Research Fellowship of the National Gallery of Art, Washington D.C. (USA). His foreign visits include U.K, France, Germany, USA, China, Australia, Thailand, Cambodia and Singapore. He has several research publications besides eight books entitled i) Agrarian and Political Movements in the State of Orissa, ii) Archaeological Sites of South Kosala iii) Orissan History, Culture and Archaeology (ed.) iv) Rock Art in Orissa v) Art and Archaeology of Orissa (ed.), vi) Lesser Known Monuments of Bhubaneswar vii) Lesser Known Monuments of Puri viii) Buddhist Heritage of Odisha.*

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## Rock Art and Astronomy: The Missing Link

Mayank Vahia

India has a very rich tradition of rock art with some of the most complex art in the form of petroglyphs, stone etchings including cupmarks and more spread over a long time of prehistory of the subcontinent. Astronomy as a subject has fascinated humans from prehistoric times. In the context of other civilisations it has been shown that rock art and astronomy are related, with several astronomical themes appearing in the sky. In the Indian context the evidence is sparse, probably because we have not searched for this evidence. In the present talk we will discuss the world scenario, some tentative Indian data and define what we should look for, in Indian art to identify astronomical symbolism in Indian Rock Art.

*Dr. Mayank Vahia* recently retired from the Department of Astronomy and Astrophysics, Tata Institute of Fundamental Research (TIFR), Mumbai, India. At TIFR he worked on space based telescopes that were flown on NASA's Space Shuttle, one Russian satellite and several Indian satellites. Later he pursued his interests in history of astronomy and science in ancient civilisations. All through his career he was keen on student training and initiated the Astronomy Olympiad programme in India which has not only created and cultivated interest in astronomy in young students but the Indian teams have performed very well in international events. After his retirement he has taken up the responsibility of setting up an innovative undergraduate programme in Mathematical Sciences at the Narsee Monjee Institute of Management Studies in Mumbai.

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## U.F.O and Alien Depiction in Pre-historic Rock Paintings

R. P. Pandey  
Mohd. Wasim Khan

The first discovery of rock art was made in the sandstone hills of Vindhya Mirzapur district (now Uttar Pradesh) in 1867, first assistant Archibald Karl of the Archaeological Survey of India. In 1883, John Cockburn saw a rhinoceros scene in the district of Mirzapur, which he described in his own research paper. The importance of art is related to human and nature, so we should move towards history to understand it. Here we want to tell about some prehistoric paintings that have been received in India from Narmada Valley for the first time.

During archaeological exploration in Raisen district, Archaeologist Dr. R. P. Pandey from "Jiwaji University Gwalior" and Dr. Wasim Khan from "Sidara Archaeological Environment Research and Tribal Welfare Society", Raisen Dr. Pandey and Dr. Wasim has found the images of the UFO and aliens from there prehistoric shelters. The first image was found near "Singori Wildlife Forest" near Raisen tahsil and another 10 km from Raisen near the village of Sadlatpur village. This search was also published in news dailies.

**Dr. R. P. Pandey**

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## **The Rock Art of Central India and Awareness in the Young Students and Archaeologist**

Narayan Vyas

The discovery of rock art in India starts from 1880 and discovery of the rock art and paintings is still continuing till today. During the course of exploration a quite number of rocks art sites have been noticed by the scholars including myself in Madhya Pradesh and Rajasthan. Archaeological Survey of India and State Government are protecting few important sites in Central India. Apart from the discovery only few scholars or archaeologist those who are in the government service, in the universities or in private concerns like in the museums etc., they are not aware for the rock art, only they are busy in the field of art and architecture, conservation, epigraphy, numismatics and other relative subjects. Many research scholars coming from out of the country take much interest in the field of rock art and excavations. At present I am trying to create deep interest in these young students, archaeologist and scholars in the field of rock art. Around the Bhopal there are thousands of rock art sites including Bhimbetka, a World Heritage site.

Now my future aim and programme regarding the awareness and development of rock art sites among the students and archaeologist with the help of local government in the following manner:-

1. Most of the rock art sites in Central India are in the hilly region and in the dense forest, but there are not sufficient facilities for the scholars. I am trying to the local people those who are residing around the rock art sites to provide the facilities to the scholars, so they can earn the money for their employment. Art present the Forest Department has open some centre under eco-tourism to give the full facilities to the scholars. Near Bhopal there are two centers at Kathotiya and Samardha under the eco-tourism with full facilities for scholars.
2. Many Universities of Central India have the subject of archaeology but not with the rock art studies. We can ask them to start this subject as practical field work at the site. Apart from the department of archaeology, the department of Fine Arts can also create new subject of rock art in regular study as a subject.
3. Time to time the students of school and colleges must visit the rock art sites, so they can create an interest for future. I alone visited the rock sites around Bhopal with the students, scholars and young archaeologist to create some awareness.

4. The Archaeology department of Central and state government may open a new department related to the rock art, so that scholars can do the research work with full facilities. Recently the states government has open a new section of rock art in the memory of Dr. V. S. Wakankar for the development of rock art and awareness among the young archaeologist. The government has nominated me as a member of Dr. Wakankar research Institute. Now I can start the awareness programme time to time with the help of government.
5. The government should organize the seminar and awareness programme near the rock art site with full facilities to the young archaeologist to create interest.

Many government and non government department organize the seminar from time to time. During the seminar can pass the resolution with full recommendation for the development of rock art and research work including full facilities to the entire interested worker. So government take necessary action in this regards.

*Dr. Narayan Vyas (b. 5<sup>th</sup> January, 1949) a retired archaeologist of the Archaeological Survey of India, Madhya Pradesh was a Member of Selection Committee in National Monument Authority, Government of India, New Delhi. He is working as a Guest Faculty member at National Institute of Fashion Technology for historic work. He delivered lecture for P.G. Diploma in Tourism and Hotel Management, Government BHEL College, Bhopal.*

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## Sacred Traditions in Central Indian Rock Art

Meenakshi Dubey-Pathak

One of the main interests of Indian rock art, not too well-known because of its being located in deep jungles, is that its cultural and natural contexts have often been preserved. It thus becomes possible to discover in local tribes the persistence of age-old traditions that may have to do with rock art and explain some of its deeper meanings. We have thus seen in Madhya Pradesh and Chhattisgarh sanctuaries and temples devoted to local gods and goddesses built next to rock art sites where terracotta bulls are brought and offered on Diwali. Other terracotta animals are elephants, tigers and horses. The deposits aim at the completion of people's wishes and the offerings are made as a gesture of gratefulness after their wishes are fulfilled.

Animals still play an important role in tribal cultures. Peacocks, parrots, horses and deer, for instance, can be seen on their bodies as tattoos. The funerary pillars of Muria Gonds are always carved or painted with a variety of animals. Such examples can be compared to the representations of animals in the local rock art. Red, white and more rarely yellow handprints and footprints are a particular motif of Central Indian rock art that we have found in several painted sites, even if it is not by far one of the most frequent themes represented. We shall concentrate on the State of Madhya Pradesh and Chhattisgarh, where we could study it in different areas. Handprints are common the world over, in India, and particularly in the region under study, age-old sacred traditions of handprint making are still alive in many places. In certain parts of the State, auspicious handprints are made on both sides of the door or on grain vats, or again on cows or on trees.

The long persistence of ancient traditions in Central India, as well as the continuance of ritual practices in painted shelters, including hand printing, enables us to better understand some of the reasons that may have prompted the author of the rock art of the region under study.

*Dr. Meenakshi Dubey-Pathak is a Wakankar Senior Research Fellow. She was awarded the high honour of 'Chevalier des Arts et Lettres' -Knight in the National Order of Arts and Letters- by the French Minister of Culture and Communication in 2014. She acted as an International Expert for rock art with ICOMOS and UNESCO, and she is a member of the Bradshaw Foundation Advisory Board (England). During her many years of fieldwork she discovered dozens of new painted sites, mostly in Madhya Pradesh (particularly in the Pachmarhi area about which she did her PhD, under the National Fellowship of UGC, NET), but also in Chhattisgarh, Rajasthan and Ladakh.*

*She has devoted nearly thirty years of her life to the discovery, study, publication, exhibitions, workshops and protection of Indian Rock Art. She has visited more than 36 painted caves in Europe and many rock art sites in the different continents.*

*She has given many lectures on Indian Rock Art and tribal Art in various National and International Universities and Museums. Film on the “Central Indian Rock Art and Tribal Art”, based on her research work, screened and awarded in the International Archaeology Film Festival in Nyon, Switzerland March 2019.*

*She has published many papers and three books. : “Rock Art of Padmarhi Biosphere”, Delhi, BR Publications, 2012. “Des Images pour les Dieux. Art rupestre et Art tribal dans le Centre de l’Inde” (with Jean Clottes). Arles (France), Éditions Errance, 2013. “Powerful Images. Rock Art and Tribal Art of Chhattisgarh”. With Jean Clottes. Bloomsbury Publications, 2017. “Madhya Pradesh Rock Art and Tribal Art” with Jean Clottes, in print.*

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## रीवा-सतना के बोलते-थिरकते भौलचित्र

पुष्पेन्द्र कुमार नंदन

विन्ध्य का यह भू-भाग मानव की प्रथम क्रीड़ास्थली के रूप में ख्यात है। यहाँ आदि युग से लेकर मध्यकाल तक के पुरातात्विक अवशेष जमावों में प्राप्त होते हैं जिनके परिप्रेक्ष्य में मानव सभ्यता के क्रमिक विकास का परिज्ञान सहजता से किया जा सकता है। प्रागैतिहासिक उपकरणों के अतिरिक्त शैलचित्र ऐसे मुख्य माध्यम हैं जिनके आधार पर तत्कालीन मानवीय समुदाय की विकास यात्रा को समझा जा सकता है। निश्चय ही शैलचित्र मानव की कलात्मक अभिव्यक्ति का सशक्त माध्यम है परन्तु यह मात्र कला नहीं है बल्कि इन चित्रों में इनके निर्माताओं तथा तत्कालीन परिवेश का प्रतिबिम्बन स्पष्ट होता है। विभिन्न विद्वानों ने इन शैलचित्रों के निर्माण के कारणों पर अपना मत व्यक्त किया है परन्तु अद्यावधि किसी निश्चित निष्कर्ष पर नहीं पहुँचा जा सका है।

रीवा-सतना जिले से प्राप्त शैलचित्रों के अध्ययन के आधार पर निष्कर्षतः यह कहा जा सकता है कि ये शैल चित्र जिनमें मानव जगत, पशुजगत एवं विभिन्न काल्पनिक चित्रों के साथ ही कुछ ऐसी आकृतियाँ भी प्राप्त होती हैं जिन्हें हम कल्पना या कलात्मक आकृतियों की श्रेणी में रख सकते हैं इनमें कुछ ज्यामिति एवं अज्यामिति दोनों प्रकार के चिन्हों के माध्यम से चित्रित की गई है। इनके निर्माण कारणों पर विचार करने पर ज्ञात होता है कि ये न केवल मानवीय भावनाओं की कलात्मक अभिव्यक्ति है अपितु इनके निर्माण में एक निश्चित उद्देश्य भी रहा है। उल्लेखनीय है कि यदि शैलचित्रों का सम्वेत अध्ययन किया जाए तो मात्र इस तरह की कलात्मक आकृतियाँ ही अपनी निरन्तरता को वर्तमान तक बनाए हुए हैं जिनके आधार पर नृतत्वशास्त्रीय अध्ययन किया जा सकता है। विवेच्य क्षेत्र में प्राप्त होने वाली आदिवासी बाहुल्य एवं ग्राम्य परिवेश से प्राप्त भित्ति चित्रों तथा प्रागैतिहासिक व ऐतिहासिक काल के शैलचित्रों का तुलनात्मक अध्ययन एक प्रभावी पहल होगी। प्रस्तुत शोध इस दिशा में एक विनम्र प्रयास है।

**डॉ० पुष्पेन्द्र कुमार नंदन** जी रीवा विश्वविद्यालय के प्राचीन भारतीय इतिहास, संस्कृति एवं पुरातत्त्व विभाग में सहायक प्राध्यापक के पद पर कार्यरत हैं। इन्होंने वर्ष 2011-12 में विश्वविद्यालय अनुदान आयोग द्वारा प्रदत्त राजीव गाँधी राष्ट्रीय अधिछात्रवृत्ति एवं वर्ष 2012-13 में भारतीय इतिहास अनुसन्धान परिषद् द्वारा प्रदान की जाने वाली कनिष्ठ शोध अधिछात्रवृत्ति को प्राप्त किया।

सहायक प्राध्यापक

प्राचीन भारतीय इतिहास संस्कृति एवं पुरातत्त्व

रीवा विश्वविद्यालय, मध्यप्रदेश





## Management of Painted Rock Shelters at Bhimbetka through Public Participation: Some Suggestions

S. B. Ota

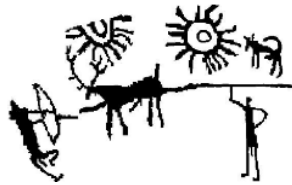
Painted rock shelters at Bhimbetka, Madhya Pradesh as one of the World Heritage property in India is unique as it has been considered as cultural heritage by UNESCO under the category of 'Cultural Landscape' and the criterion that determines the outstanding universal value (OUV) clearly brings it under the sub-category of 'continuous landscape'. The criteria (v) of OUV states 'Bhimbetka is closely associated with a hunting and gathering economy as demonstrated in the rock art and in the relicts of this tradition in the local *adivasi* villages on the periphery of this site'. This implies the long cultural continuity from prehistoric time to present which can be seen among the local inhabitants within the buffer zone of Bhimbetka. Therefore it becomes imperative to preserve and protect both tangible and intangible heritage of the local inhabitants alongside the tangible heritage of Bhimbetka. The intangible heritage that forms part of the local culture becomes important for the heritage managers to recognise and preserve for the posterity. This can only be possible when the initiatives are taken to manage Bhimbetka through public participation and more specifically with the involvements of local inhabitants in right mind-set.

The present paper in fact deals with the issue of public participation in managing Bhimbetka heritage to preserve in totality ensuring the OUVs as recognised by UNESCO. Certain issues like forest fair that forms a major component of the cultural tradition in the area has been discussed with its different dimensions, its impact and management. Besides, to guarantee the intangible heritage including the traditional knowledge system of the local inhabitants issues like forest dependence, cattle grazing, knowledge about biodiversity etc have been discussed juxtapose the provisions as made in 'The Indian Forest Act 1927', 'The Forest (Conservation) Act 1980' and 'The Wildlife (Protection) Act 1972'. It is felt that certain provisions made in these legislations are required to be reconsidered as a special case for the local inhabitants, if Bhimbetka is preserved in its totality. Further, it is also realised that local inhabitants have a greater role to play; hence their presence may be considered as stake holder in the decision making process in management of Bhimbetka.

*Dr. S. B. Ota retired as Joint Director General from Archaeological Survey of India, New Delhi in 2017. He has also served as Director-in-Charge of the Indira Gandhi Rashtriya Manav Sangrahalaya (IGRMS), Bhopal. Dr. Ota is the recipient of "Young Scientist Award" from Indian Science Congress Association in 1987, awarded Charles Wallace Indian Trust Fellowship in 1995 and was a Short-term Visiting Fellow by Japan Foundation in 2006. Some of the main projects include salvage archaeological investigations of the submergence area of Narmada Valley Dam projects in Madhya Pradesh and prehistoric investigation in high altitude Ladakh Himalayas, Andaman Islands etc. His field of interest includes prehistory, field*

*archaeology, salvage archaeology, documentation, archaeological heritage management, structural conservation etc. Presently working on two major projects in prehistory – one is the “Geo-archaeological Investigations of Acheulian Sites at Tikoda and Damdongri, District Raisen, Madhya Pradesh” and other one is the “Understanding Early Human Occupations in High Altitude Ladakh Himalayas”.*

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## Painted Rock Shelters around Gwalior

S. K. Dwivedi

For the studies of Indian art, rock paintings found in the shelters of the vast hill ranges of central India are very important. The significance of these Paintings lies in the fact that how the early man created this beautiful art. Still these are a little understood aspect of Indian art. Their significance for the society is pessimistic and optimistic both. A large number of painted rock shelters are seen in the radius of about 60 Kilometers around Gwalior. Some of them have been scantily studied and a few of them are still unexplored. The sites are namely Gupteshwar, Maddakhoh, Chunakhoh, Mohana, Tikla, *Bhau Sahib Ki Samadhi* etc. The rock paintings of these sites have a large variety of linear, geometric and anthropomorphic forms. The scenes of hunting, dancing individually and in group, different types of animals like deer, porcupines, donkey, elephant, monkey, boar, wolf, bison and the birds like peacock, crows and cocks are interestingly painted by the early man of this area. The other creatures like serpents, scorpions, fishes and lizards are also the subject of the paintings. Some religious symbols like *swastik*, sun, moon, *panchangula* and *chakravat* has also been depicted in the rock paintings around Gwalior.

This paper aims to draw the attention of art historians towards a scientific study of the vast range of paintings of this area.

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## Honeycombs in Indian Rock Art and their Manifestations in the Gawilgarh Hills Rock Shelters

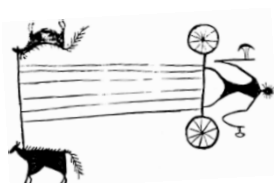
Nandini Bhattacharya Sahu

The Bee and the Beehive have always been considered a very sacred being and entity in ancient India. The oldest literature, the *Rig Veda* contains many hymns dedicated to them. These together and separately have been valued in not only ancient India but in the other ancient civilizations too. No wonder the Indian Rock Art is replete with the Honey Comb motifs- illustrated variously and the decorated rock shelters at Gawilgarh Hills have plentiful of these, across the periods and mirrored through Pictographs as well as Petroglyphs.

The present paper aims to discuss the honey comb patterns as it is very commonly depicted in the Indian Rock art and emphasise specially on the theme as gleaned from the rock art at the decorated rock shelters discovered by the ASI, Nagpur team.

**Dr. Nandini Bhattacharya Sahu** (b. 1969): obtained her formal education from the Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur. After completion of the PG Dip in Archaeology from Institute of Archaeology, New Delhi, she joined the Archaeological Survey of India in 1997. Since then, she has been working in the Department in various capacities and currently is the Regional Director of the Eastern region, at Kolkata. She has been an avid student of Archaeology generally and Field Archaeology specifically, having researched immensely in the arenas of excavations, explorations and Rock Art and Conservation. She has contributed her papers and presented at various National and International Seminars and Conferences and has over twenty-five publications in her name. She has worked at sites like Bhirrana (Haryana), Pulichintala Irrigation (Andhra Pradesh) and the Gawilgarh Hills Rock Shelters.

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## Petroglyphs in the Rock Shelters of Gawilgarh Hills and Odisha: A Comparative Study

Prabash Sahu

The prevalence of rock art in the Gawilgarh Hills in the Betul District of Madhya Pradesh was reported in 2007 and subsequent researches and documentation of two hundred and forty seven decorated rock shelters along with more than five hundred plain shelters by the Archaeological Survey of India from 2009 to 2014 has put the region as having the second largest concentration of rock art site in India after the famous World Heritage Site of Bhimbetka in the same state of Madhya Pradesh. The rock art studies in Odisha began in 1933 with the discovery of rock engravings in the Vikramkhola rock shelter situated in the Jharsuguda district. Since then many other scholars have reported rock art from different parts of the state amongst them the contribution of Sadashiba Pradhan stands out as he put the state of Odisha in the rock art map of India with scientific documentation of more than fifty decorated shelters in the region. The rock art of the Gawilgarh Hills shows an uncanny similarity with the rock art of Odisha as both displays the preponderance of petroglyphs in the entire gamut of decorations in their rock shelters. The present paper is an attempt to throw light on the repertoire of petroglyphs from these two distinct and distant geographic regions.

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## Geological Characterisation of the Rock Arts of Odisha

Devananda Beura

Rock arts are found in many districts of Odisha. They are drawn or engraved on the rock bodies with different spatial positions. Specific geomorphological setting like caves, rock hollows, flat floors, erect walls of the rock bodies are mostly explored for rock arts. Making petroglyphs and pictographs can be characterised geologically taking into account of various factors like types of rocks, hardness of rock, texture, structural features, disposition and colour. Geologically the rock arts are found on stratification, lamination and erosion surfaces and on tilted, broken, fallen rock bodies. Some of the rock arts are buried or broken by geological processes and some geological structures so formed simulate the rock arts. The paper intends to discuss the geological factors in development and interpretation of rock arts.

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## The Rock Art of Hazaribag: Ethno-Archaeological Analysis (Special Reference to Likhani and Ishko Rock Shelter)

Ganga Nath Jha

This paper is ethno-archaeological analysis of two rock art sites – Likhani and Ishko. Likhani rock shelter is situated near Satkaria, a Santhal village in Dari Block and Ishko is a Munda village in Barkagaon block. Both blocks are in Hazaribag district of Jharkhand. Surrounding villages of both rock art sites are inhabited with indigenous (*Mulvasi*) and tribal (*Adivasi*) population. Likhani is situated on the bank of Marangada river and is well known in nearby villages for funeral rituals and common worship for prosperity in which *Pahan* (tribal priest/ sacred specialist) plays an important role. Likhani site is recently discovered by the author himself and this is the first ethno-archaeological analysis of Likhani and Ishko rock art. This is a preliminary study where it has been tried to analyse the similarities and differences in the symbols, figures and colours used in them in Ishko rock art. There are so many symbols related to nature, such as figures of sun and animals found in both rock art sites. The figures of geometric and decorative symbols are also visible. All symbols express different views, ideas, and cultural and day-to-day activities of early man. These rock arts are worshiped by villagers as ancestral heritages. Both rock art centres are created under sand stone shelters. The paper also analysed the concurrent relation and spiritual believes of local population with these rock art sites. It has also tried to capture the perception of nearby villagers about these sites. Both the sites have been deteriorating day by day and need an immediate action for preservation. These sites are rich sources of information and evidence of early man and their culture and are important source of knowledge for archaeological, historical, anthropological and cultural studies. Through this study, the author wants to help in preservation of these valuable heritages through community participation, as; they still have worth for them in their cultural activities and sacred performances. Unfortunately, both the sites are affected by excavation, pollution, weathering attack and human vandalism. This analysis is based on primary survey, photography technique and digital documentation. Interviews were also taken from the inhabitants of nearby village, headmen, priests and other key informants. Secondary data were also used for analysis of Ishko site. Findings of this study would help in preserving/preventing from decaying of these rock art sites.

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## Eastern Indian Rock Art Sites as Sacred / Ritualistic Spaces: With Special Reference to Southern Bihar and Adjoining Jharkhand

Awadh Kishore Prasad

The rock art of eastern India and especially southern Bihar and adjoining Jharkhand is endowed with some special features which indicate that the rock art sites were treated here as sacred spaces and their function was mainly ritualistic / ceremonial in nature. This premise is substantiated on the following grounds. First, in southern Bihar and Jharkhand generally only one rock shelter in a cluster of numerous rock shelters was selected for producing paintings. This special rock shelter was probably considered a sacred space- a “temple” or a “community hall” for performing ritualistic/ceremonial activities. This trend is also observed in the neighboring Odisha where the painted rock shelters are locally called either “*Lekhamoda*” (a rock shelter with writing) or “*Ushakuthi*” meaning ritual chamber or “*Usha kupa*” meaning ritual cavity. Secondly, there are frequent depictions of ritualistic scenes. Here even the hunting scenes are primarily symbolic and ritualistic where even the archers are generally not shown engaged in actual hunt. Thirdly, shamans/anthropomorphs are prominently depicted in the rock art of this region. Surrounded by various types of symbols/geometric signs they are generally shown with some animal/bird like heads, spread out unusual legs and hands and with very big phalluses. Like the rock art of the San tribe of South Africa rock art of eastern India also reflects overwhelming role of the Shamans. They still play important role in religious and ceremonial activities of the tribal communities. Fourthly, there is obvious predominance of symbols, intricate designs /geometric signs. Every painted rock shelter in southern Bihar and Jharkhand invariably contains some symbols and geometric signs. In rock art of Odisha also repeated representations of the geometric patterns indicate transmission of some kind of a symbolic message. Finally, numerous *Kharoshti*, *Kharoshti-Brahmi*, *Brahmi* and *Shankh* rock inscriptions found in rock art of Bihar and Jharkhand provide ample evidence of the painted rock shelters being used for performing local rituals. This ancient tradition of using rock art sites for ritualistic purposes still continues among some tribal communities in the eastern Indian rock art region.

*Dr. (Col) Awadh Kishore Prasad, a Senior Research Fellow of the ICHR, New Delhi is a multifaceted scholar and renowned discover. He is well known for his extremely important original discoveries of 94 rock shelters/open rock surfaces containing prehistoric rock art, a large number of Stone Age tools including 18 factory sites, four megalith sites, eight Buddhist cave monasteries and several Kharoshti, Kharoshti-Brahmi, Brahmi, and Shankh rock inscriptions in very remote, difficult and extremely dangerous forested hilly regions of Nawada, Jamui, Nalanda and Gaya districts in Bihar and adjoining Giridih and Koderma districts of Jharkhand during the 1900s and 2010. Dr Prasad has presented*



*numerous research papers at several international and national conferences/seminars. Besides being author of a pioneering book entitled "The Bhils of Khandesh" he has also contributed several research articles related to prehistoric rock art, Stone Age industries, Buddhism and ancient rock inscriptions in various national and international journals. These outstanding discoveries have important bearings on the history as well as prehistory of India and particularly eastern India.*

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## Rock Art of Kaimur and Rohtas Plateau, Bihar

Sachin Kumar Tiwary

Rock art reveals great potentialities for progressive historical cultural studies from the prehistoric times to today's times. The present paper is based on the rock art of Kaimur and Rohtas region of Bihar, its distribution and description. In the present work, it has been attempted to make a systematic study of rock art of the Kaimur and Rohtas districts of Bihar based on the field exploration, documentation, analysis of artefacts related to rock art found in course of exploration. The concentrates on the explored sites, its nature and feature of caves and shelters, general features and subject of art, style notation, orientations, tentative chronology, comparative analyses, superimposition and the author of this primitive art. In spite of the above, the special attention is made for the Ethno Rock Art interpretation with a possible explanation of the local inhabitants' customs, rituals and day-to-day lifestyle. Because of new pieces of evidence in present tradition and game method author has come to resume whether any link can be made between ancient rock art living pattern and modern local groups art and culture, those are residing (the tribes, semi-tribe) in the hill, foothill and on the plain. Though, it is very difficult to correlate it with the existing tradition because what we have documented from the shelter and what we are observing in the local inhabitants are belongs to two different living pattern and period. But is it also trying to show the significance of both; the tradition of living things in today's life and the executed things in the form of rock art over the rock surface during ancient times. Without any discussion author agrees that there are problems in explaining the things if there is incoherence between local ethnic activities and the rock art of by-gone days which may be due either to a remarkable shift in social behaviours during the long period span or to the relative seclusion of the developing society from the inspirational art traditions manifested in local rock art. All these details are especially helpful to understand the extent to which it has decided the archaeological and historical framework of the region. The above description provides our interpretation and understanding of this old yet before unstudied region for rock art.

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## Rock Art Research in Northeast India and Recent Discovery of Non-Figurative Grooved Lines in Neolithic context

Tilok Thakuria

The study on Rock Art in Northeast India has yet to gain academic interest. However, there are some emerging effort seen in the recent years on locating, documenting and explaining Rock Art in the region. The problem however remains in defining the available art of the region within the theoretical concept of Rock Art. So far the region has no Palaeolithic remains. The claims made previously failed to convince and devoid of stratigraphical context. The only cultural remains belonging to Prehistoric period that exist in the length and breadth of the region are Neolithic, and no rock art being reported belonging to it. What the region is having are engravings on megaliths belonging to recent past or associated to living memory, and some engravings on rock surface of medieval period. So far no pictograph reported from the region of any cultural context. Despite these, recently many of the scholars have made their effort to locate, report and document engravings on monoliths and rock surface. At the same time, explorations and efforts have been made to locate pictograph in alongside the prehistoric sites. The present paper will try to evaluate the issues related to rock art studies in the region in the context of Prehistory and ethnography, and give an update on the progresses so far made on the subject based on the work done by the individuals and institutions. It will also focus on the recent discovery of grooved lines on a non-artefact dolerite flake in the excavation at Misimagre.

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## Decoding the Engraved Motifs and Figures of Assam and Adjoining Areas

Dwipen Bezbaruah

The Brahmaputra valley in Assam and the certain areas of the hilly terrain in Assam and adjoining states namely Dima Hasao of Assam, Tharon areas of Manipur and Champai district of Mizoram has numerous non thematic engravings on natural rock surface. The content and meaning of the engravings are an important issue which has been discussed in academic circles. While the geometric designs like the labyrinth recorded in different parts of the globe have universal underpinnings the local cultural connotations cannot be ruled out. The figure of human in action with spreading hands and legs may be the symbolic representation of sorcerers or shaman, is very common even among the present tribal communities of the region. Another important feature of the occurrence of the rock art sites in this region is their association with archaeological findings which also open up newer dimension of understanding and interpretation. The interesting point is the occurrence of trident with a Buddhist motif from the site at Central Assam indicates the coexistence of Buddhist beliefs with that of Shaivism. The repetitive occurrence of footprints in Tharon areas is found to be associated with the community beliefs and practice. While the figures of animal and bird leave the impression that represents the nature of symbolic and the ritualistic figures that have a contextual relationship with the society and culture. This paper analyses these issues in details on the basis of the primary findings by the researcher supported by secondary sources.

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# Rock Art in Khoupum Area

P. Binodini Devi

The study on the rock art is a well-established discipline in different parts of the world. This is an important field both for archaeology as also ethnology and lifestyle studies. Even though India is included among the world's six major prehistoric rocks art concentrated countries of the Stone Age and extensive researches have been carried out in this field exploring various avenues of growth, till date no intensive and extensive research on the rock art of North-east Indian states in general, and Manipur in particular has been done. With this concept in mind, the present author has proposed to conduct research work in this field to highlight the different Rock arts of the Khoupum area.

Manipur is one of the smallest states of India's north-eastern region. This state is populated by various ethnic groups. Some of these communities practiced carving drawing, and engraving works on different rocks, monolithic structures, village gates, and front walls of their houses having various motifs. The present paper tries to focus more on the rock arts of the Khoupum area, Noney district, of this state based on my own records collected during my field works.

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## Possible Interpretation about the Occurrence of Petroglyphs in Vidarbha Region of Maharashtra

Kantikumar A. Pawar

Art is the manifestation of innate beliefs, outlook and purpose expressing the materialized vitality of activities of man, born out of his own experiences. Even in the remote prehistoric age, our ancestors had taken up the medium of art as an expression of their deeds, proposed and done, which survives till today as evidence of the earliest visual documents. Rock art occurs in nearly all countries of the world and has been studied for centuries in several world regions. As of till date, rock art has been reported approximately from more than 150 countries and regions across the globe. India is one of the three countries having the richest treasures of rock art reported throughout India in different geological, geographical and climatic zones, particularly in the areas of sedimentary, metamorphosed and igneous rocks. The first information of rock carvings was given by F. Fawcett in 1901 from his discovery of the Edakkal caves of Kerala. Petroglyph in the auditorium cave (III F-23) of Bhimbetka or the cluster of 496 cupules in the cave of Dar-ki-Chattan has given the antiquity of these petroglyphs belonging to the lower Palaeolithic period on the basis of their association with Acheulian strata. Vidarbha region is an eastern part of Maharashtra and it is one of the very important regions known for its rich archaeological wealth. The eastern part of Vidarbha region is having rich geological strata in form of the basalt formation of Deccan and sandstone hillocks of central India. The academic reporting's by the author highlighted some of the very important petroglyph sites in the region. Present paper attempt to throw light on this connection with reference to the various petroglyph sites explored in eastern Vidarbha region. Some of the possible explanations would have been discussed in detail.

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## Paradigm Shifts in Rock Art Research Following the Discovery of Bhimbetka and its Impact on South Indian Rock Art

Jenee Peter

Rock art research in south India was pioneered by Colonial officials like Fred Fawcett and by colonial institutions such as the Royal Asiatic Society of Bengal, Bombay Literary Society and Mythic Society in the late nineteenth century. A paradigm shift in rock art research in South India was facilitated in the 1950s and 60s following discoveries of six hundred painted rock shelters and caves in Bhimbetka in Madhya Pradesh by Dr. Wakankar in 1954. He went on to cover 36 regions spanning almost entire contour enumerating 1532 rock shelters (Deglurkar 2017:13). The paradigm shift was not just due to the vast number of discoveries but also the minute retailed recording in writing, pots and drawings, and the artist approach within the positivist view of visualizing the past. Emboldened with empirical data for Palaeolithic sites in Kerala, research scholars in 1970s discovered more rock art sites. Discoveries received great media attention then. It attained a plateau as archaeological studies shifted to Iron Age cultures. Rock art research was revived in twenty-first century with a twenty fold increase in the number of rock shelters. Maximum discoveries have taken place in Anjunad valley in Idukki district. The Western Ghats are yet to be systematically explored and intensively combed for rock art finds.

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## Rock Art of Kerala: Concord and Contentions

Ajit Kumar

There are over fifty known rock-art sites in Kerala today. Rock-art in Kerala was first noticed in 1894 and an account of it was published by Fawcett in 1901. Later studies undertaken by Thampi and Mathpal have generally tried to classify and date the rock-art in Kerala following the parameters used in the study of Bhimbetka paintings. The concord that the corpus of rock-art can be divided broadly into Petroglyphs and Pictographs stands undisputed. Contentions on the rock-art of Kerala arise on issues relating to the dates and possible meaning of the motifs represented. This paper tries to briefly discuss the motifs noticed in rock-art of Kerala and their possible connotation and dates.

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## Prehistoric Rock Art of Are Gudda (Badami) The Earliest Map in the World?

Mohana R.

Are Gudda is located 2 km of north-northwest of Kuṭakanakeri village and 9 km northeast of Bādāmi Taluk head quarter. The hill formation resembles 'shoe valley'. There are eleven rock shelters viz., *Āne phaḍi*, *Jumjum phaḍi*, *Paḍiyamma phaḍi*, *Chikka Pārivāla phaḍi*, *Bāgu phaḍi*, *Ander phaḍi a&b*, *Karaḍi gavi*, and *Pārivāla phaḍi a, b&c*. Out of eleven, seven of them have paintings which are described in this paper.

The particular painting is most unusual of all in Are Gudda which is a rough trapezium shape with thick large eleven big dots arranged in three lines. This shape also might correlate with the valley which is horse shoe valley or more like a trapezium. There are total 11 rock shelters in this valley and are shown as 11 dots. This is a unique in the study area, which is generally uncommon elsewhere in India as well in global context.

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## Scientific Characterization of Pigment Used for Paintings in Rock Art of Sonbhadra and Mirzapur, Uttar Pradesh

Chandra Mohan Nautiyal, S. S. Panda, S. S. Ram and Praveen C. Krishna

The rock art has since long attracted those interested in the study of art as well as societal evolution as these are documents of the then society. However, introduction of sophisticated laboratory techniques in the field has led to remarkable insight in the understanding of these creations. Earlier there were some efforts by some groups but intensified efforts under a project from IGNCA, New Delhi, and the study of rock art in the Vindhyan area in Uttar Pradesh has led to documentation of a number of sites where surprisingly large art work was revealed. While in terms of subjects painted, not much variation was evinced for instance, use of colours so diverse in Bhimbetka, has been found missing in the districts of Sonbhadra, Mirzapur, and Chandauli. Applying a variety of techniques like spectrophotometer, FT-IR,  $\mu$ -XRF and ESEM-EDS to analyse colours from the perspective of mineralogy, elemental constitution and morphology, an effort has been made to understand the competence of and techniques used by the early artists. Elements like Si, Fe, Ca have been seen as major and Ti, Cr, Au as minor elements. Presence of minerals like quartz, calcium hydroxide, calcium oxalates and some organic phases have also been revealed using FT-IR spectrum. The ESEM results are used to compare merits of two possibilities viz. intentional use of calcium compound in painting probably to provide a protective layer or suitable ground for improve bonding of pigment with the rock and enhance durability of the picture and leaching of calcium salts from the sand stone.

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