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The Rock Art of Ladakh: A Historiographic and Thematic Study

Laurianne Bruneau

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Laurianne Bruneau. The Rock Art of Ladakh: A Historiographic and Thematic Study. Ajit Kumar. Rock Art: Recent Researches and New Perspectives (Festschrift to Padma Shri Dr. Prof. Yashodhar Mathpal), New Bharatiya Book Corporation, pp.79-99, 2015, 81-8315-263-5. hal-01696972

HAL Id: hal-01696972

<https://hal.science/hal-01696972v1>

Submitted on 24 Jan 2024

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Dr. **Ajit Kumar** did his M.A from Deccan College, University of Poona; P.G. Diploma in Archaeology from School of Archaeology, Archaeological Survey of India, New Delhi and Ph.D from Tamil University, Thanjavur.

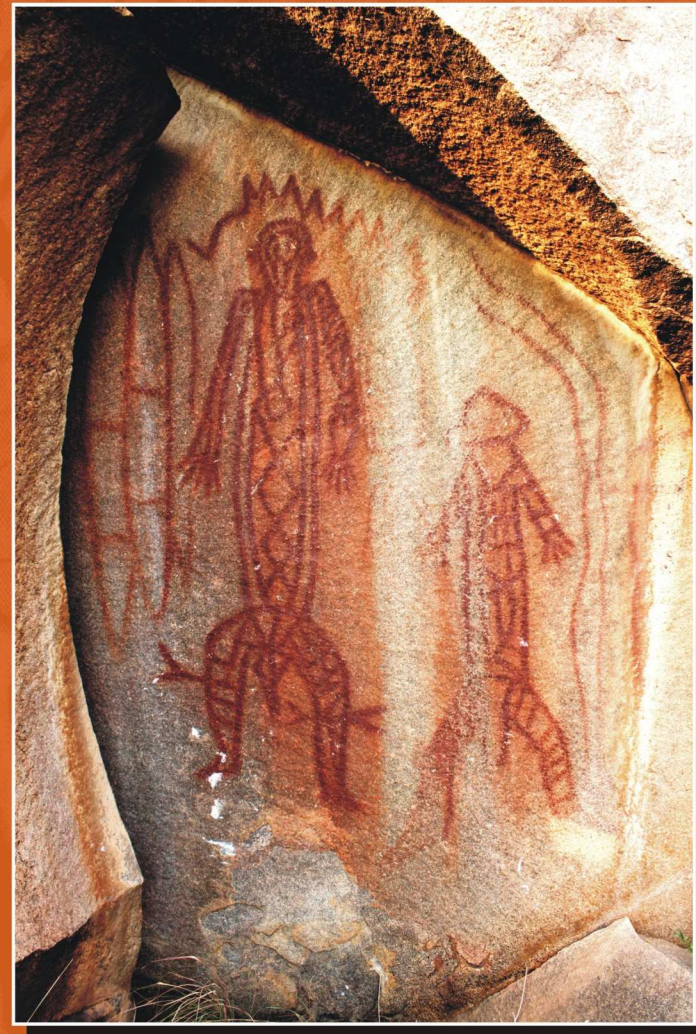
He started his career in the Archaeological Survey of India. He is currently the Head of the Department of Archaeology, University of Kerala.

He has presented papers in several national and international seminars and conferences. As part of his academic works he has travelled to several countries like Sri Lanka, Iran, Sweden, and Norway.

He has published several articles in academic journals and books. Books published by him include, *Archaeology of Kerala: Emerging Trends* (2011), *Harappan Culture Problems and Issue* (2012), *Sculptural Art in Early Buddhist (Hinayana) Caves of Western Maharashtra (A Stylo-Chrono Study)* (2013) and *The Megalithic culture of South India* jointly with K.N.Dikshit (2014).

Cover Design: Ajit Kumar
Layout : Rachana Uday, Tvpm

Jacket photos:
Front cover : Petroglyphs from Edakkal, Kerala
Back cover : Pictographs from Kurugodu, Karnataka
Photo Courtesy: M. Mahadevaiah
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**New Bharatiya Book Corporation
Delhi, India**

Rock Art: Recent Researches and New Perspectives

(Festschrift to Padma Shri. Dr. Yashodhar Mathpal)

Rock Art: Recent Researches and New Perspectives
(Festschrift to Padma Shri. Dr. Yashodhar Mathpal)
Edited by **Ajit Kumar**



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Ajit Kumar

Rock Art: Recent Researches and New Perspectives (Festschrift to Yashodhar Mathpal)
Mathpal 2014: i-iv 1

This book is a humble tribute to Padma Shri. Dr.Yashodhar Mathpal, a scholar whom I had known from his rock art research works on Bhimbhetaka and Kerala. I got to meet him in person at New Delhi, while attending the International Conference on Rock Art organized by the IGNCA in 2012. I was deeply drawn to his scholarship, simplicity and affectionate approach. When I placed before him the thought and request of bringing out a festschrift volume in his honour, he acceded to it after some persuasion.

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Editing the articles and making it presentable for publication was an arduous task happily undertaken. In this task, I have had the support and active collaboration of young dynamic assistant editors like Rajesh.S.V, Abhyan, G.S, Raj.K.Varman and Sachin Kr. Tiwary. The credit of setting the books in its entirety goes to Rajesh, S.V, and I am indebted to him for it. I am thankful to proprietors of New Bharatiya Book Corporation, New Delhi Shri. Subhash Jain and Deepak Jain for conceding to publish the book.

**Rock Art:
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(Vol. I)

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Ajit Kumar



New Bharatiya Book Corporation
Delhi India

Publisher :

NEW BHARATIYA BOOK CORPORATION

208, IInd Floor, Prakashdeep Building,

4735/22, Ansari Road, Daryaganj,

New Delhi - 110002

Ph. : 011-23280214, 011-23280209

E-mail : deepak.nbbc@yahoo.in

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© Publisher

ISBN : 81-8315-263-5

978-81-8315-263-1

Type Setting: Dr. Rajesh S.V

Cover Design: Dr. Ajit Kumar

Assistant Editors:

Rajesh. S. V

Abhyan. G. S

Raj. K. Varman

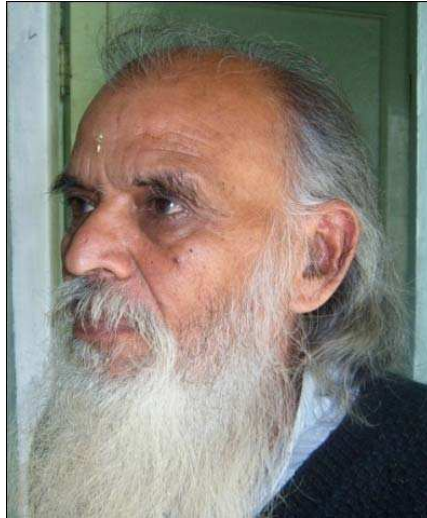
Sachin Tiwary

Printed at :

Jain Amar Printing Press

Delhi – 110007

Yashodhar Mathpal



Padma Shri. Dr. Yashodhar Mathpal was born in 1939, in the small village of Naula, in Almorah district, he is an acknowledged Archaeologist, Curator, Philosopher, Gandhian and Artist.

Yashodhar Mathpal belongs to a category of dedicated and selfless lovers of art. His artistic talents came to the fore, as a child, when he had to assist his uncle, an astrologer, in drawing horoscopes and illustrating almanacs. Perusing his skills and interest, he later obtained his Masters degree in fine arts from Lucknow Arts College. Mathpal came back to his village and started teaching in the school founded by his father, who was a social worker and a follower of Gandhi. His father's nationalist idealism exposed him to Gandhian thought and philosophy which cultivated in him austerity and simplicity.

In 1973, he read a magazine article on the rock paintings of Bhimbetka near Bhopal in Madhya Pradesh. He resigned his job and with the few hundred rupees he had saved, set out to join the Deccan College under the University of Pune to obtain his Ph.D in Archaeology on Bhimbetka rock-paintings. Mathpal studied and reproduced the rock painting of Bhimbetka laboriously. He discovered that primeval drawings often tell stories of the lives of our ancestors who painted them. Consequent to obtaining his doctorate, Mathpal has carried out archaeological exploration-excavations and rock art studies in the regions of Kerala, Uttar Pradesh, Madhya Pradesh and the Shivaliks.

Mathpal has tried to visualize the life of the prehistoric man and has captured some really beautiful glimpses of these on his canvas. His reproductions breathe with a life of their own and have received praise from art-lovers all over the world. His paintings have been exhibited in France, Italy, Portugal,

England and Australia. He has also converted his drawings into glossy picture-postcards, to popularize and bring out the depth of ancient rock art.

It is one thing to eulogize art/folk-art and folk culture, and yet another to dedicate your life to the preservation of this rich and rare cultural heritage. With only his vision and invincible spirit by his side, Dr. Mathpal embarked on a venture which today has flowered into the Folk Culture Museum in Bhimtal. It is a one-man show and he runs it without accepting any aid either from the government or from any individual. The museum houses more than 700 stone implements of prehistoric period, collected and classified by Mathpal himself, old fossils, pottery and bricks recovered from prehistoric/historic excavation sites, dozens of woodwork specimen from Kumaoni region, rare manuscripts, and other folk and tribal crafts are the pride of his collections

He has authored eight books and has more than 175 published papers. He has presented papers in various national and international seminars and conferences and won accolades. His efforts and contribution to promote Indian culture has received appreciation from the society at large. He has been felicitated with several awards of international and national fame including Padma Shri from the Government of India. He continues his life, which is a saga of persistence, perseverance and patience at Bhimtal, nurturing his endeavour to preserve folk art and culture.

About this Book

This book is a humble tribute to Padma Shri. Dr. Yashodhar Mathpal, a scholar whom I had known from his rock art research works on Bhimbhetaka and Kerala. I got to meet him in person at New Delhi, while attending the International Conference on Rock Art organized by the IGNCA in 2012. I was deeply drawn to his scholarship, simplicity and affectionate approach. When I placed before him the thought and request of bringing out a festschrift volume in his honour, he acceded to it after some persuasion.

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Dr. Ajit Kumar

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The Rock Art of Ladakh: A Historiographic and Thematic Study

Laurianne Bruneau

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***Abstract:** The existence of Petroglyphs in the Ladakh region has been known since the 1880s. Over the years, many new sites have come to light. Today there are over 150 known rock art sites from the region. This paper briefly dwelling on the history of research in the region proceeds to assess the distribution and themes represented in the rock art of Ladakh.*

Introduction: Geographical Setting

Ladakh is the largest tract (approximately 60 000 km²) in the state of Jammu and Kashmir (Republic of India). It stretches from the Zoji pass (3528 m) in the west to Pangong lake (Spang-gong mtsho) in the east (4350 m). The region is circumscribed by the Great Western Himalayan range in the south and the Saser subrange of the eastern Karakorum in the north. Originating north of Mount Kailash (Ti-se), the Indus river runs west through a corridor between, the Zaskar (Zangs-dkar) and Ladakh ranges and onto the northern areas of Pakistan (Gilgit-Baltistan province). Several tributaries flow into the upper Indus, the most important being the Zaskar river which gives its name to the southernmost portion of Ladakh. The northern area of Ladakh is comprised of the Nubra (Ldum-ra) and Shyok (Wylie unknown) valleys whose rivers join the Indus further downstream in Baltistan (Sbal-ti). The average altitude of the valleys of Ladakh is 3500 m, except for the eastern area around Pangong lake, which marks the western limit of the Changthang.

Distribution of Rock Art Sites

Rock art has been documented all over Ladakh. To date about 150 sites have been systematically documented or surveyed totaling almost 20 000 petroglyphs (**Fig.1**). The highest density of rock art is found along the Indus where sites stretch from Dah (Mda) in the west (2700 m) to Kidmang (Skyid-mang) in the east (4000 m). Many others are found along the Nubra and Shyok as well as beside the Zaskar River and its tributaries (Tsarap, Tse-rab and Doda, Stod). The size of sites varies from a single isolated rock to a concentration of a thousand engraved boulders.

Previous Studies

The existence of petroglyphs in Ladakh has been known since the 1880s. The earliest mention of carvings in the region was made by the Austro-Hungarian researcher and linguist Károly Jenő Ujfalvy de Mezökövesd who reports anthropomorphic and zoomorphic representations as well as hunting scenes along the Suru (Ujfalvy 1884 248).¹ The first publication dedicated to the topic was authored by the Moravian missionary August Hermann Francke in 1902 who, in the following two decades, published a series of articles on the topic (Francke 1902, 1903, 1905a, 1905b, 1905-1907, 1906a, 1906b, 1907a, 1907b, 1914a, 1914b; Francke and Jina 2003c).² He reported 37 rock art locations mainly along the



Indus, in between Leh (Gle) and Khaltse (Kha-la-rtse), as well as a few others in Zanskar and around Dah. Although Francke was more interested in rock inscriptions than in images, his data (descriptions, hand drawings and rare photographs) are invaluable, since major sites such as Alchi (A-lci) and Khaltse have been greatly damaged in the last century. The important site of Tangtse (Btang-rtse / Thang-rtse), famous for its Tocharian, Sogdian and *sāradā* inscriptions, was also reported in the early 20th century (Francke 1925; Sander 1994; Sims-Williams 1993).³ In the 1930s, the German geologist Helmut de Terra and the Italian tibetologist Giuseppe Tucci published some photographs of petroglyphs taken during their expeditions in Ladakh (De Terra 1931, p. 47-48 (Pl. 6b, 7)).⁴ The former proposed a chronology of carvings in four phases based on stylistic groups (De Terra 1940 48).⁵ Due to the subsequent closing of the region to foreigners (1949–1974) no mention was made of the rock art of Ladakh for nearly 30 years. In their ‘Cultural Heritage of Ladakh’ (1977), Snellgrove and Skorupski briefly refer to the existence of rock-carvings some of which they regard as indigenous (Snellgrove and Skorupski 1977 15).⁶ In the second volume of their landmark publication, a chapter deals with carvings at Alchi but mainly focuses on Tibetan inscriptions (Denwood 1980)⁷ At the beginning of the 1980s several photographs of Alchi as well as from a site in Zanskar were published by French travelers (Klodzinski and Gouazé 1982; Peissel 1984).⁸ In 1990, Francfort carried out a preliminary study of rock images for which he draws parallels with Central Asian petroglyphs from the Bronze Age and Iron Age (Francfort *et al.* 1990; 1992).⁹ In addition to proposing a chronological and cultural background for the carvings considered, a first (rough) map of distribution of rock art in Ladakh is provided (Francfort *et al.* 1992, Fig. 30).¹⁰ Twenty-two sites are mapped, most of them along the Indus and taken from Francke’s publications.

Alongside these publications general surveys of archaeological sites of Ladakh were carried out in the late 1970s and early 1980s by members of the Frontier and North-Western Circles of the Archaeological Survey of India (IAR 1975–1976, 1978–1979 and 1981–1982).¹¹ In 1988–89 the Srinagar Circle, under the direction of Fonia, conducted exploration along the banks of the rivers Zanskar and Suru and engravings were noticed, among other remains, at Phe (Phye) and Tonde (Stong-sde) (IAR 1993 27-29).¹² Another survey was conducted by the Srinagar Circle in the Nubra valley and Changthang area in 1992–1993, where eight previously unknown rock art sites were reported (IAR 1997 36-38).¹³ Although their exact location is provided there is no precise description of the carvings. In 1998–1999 two surveys with the objective to locate and document rock engravings and carvings were conducted along the Indus and its tributaries (Mani 1998).¹⁴ Petroglyphs were noticed all along the Indus from Leh in the east to Batalik in the west, including several previously unreported sites below Khaltse. Dr. Mani describes some images and provides possible interpretations regarding their significance (Mani 2000–2001, 99).¹⁵ He also proposes a tentative chronological and cultural sequence of the rock art of Ladakh in four phases (Mani 107).¹⁶ To our knowledge no detailed publication of the data collected by the ASI was ever published.

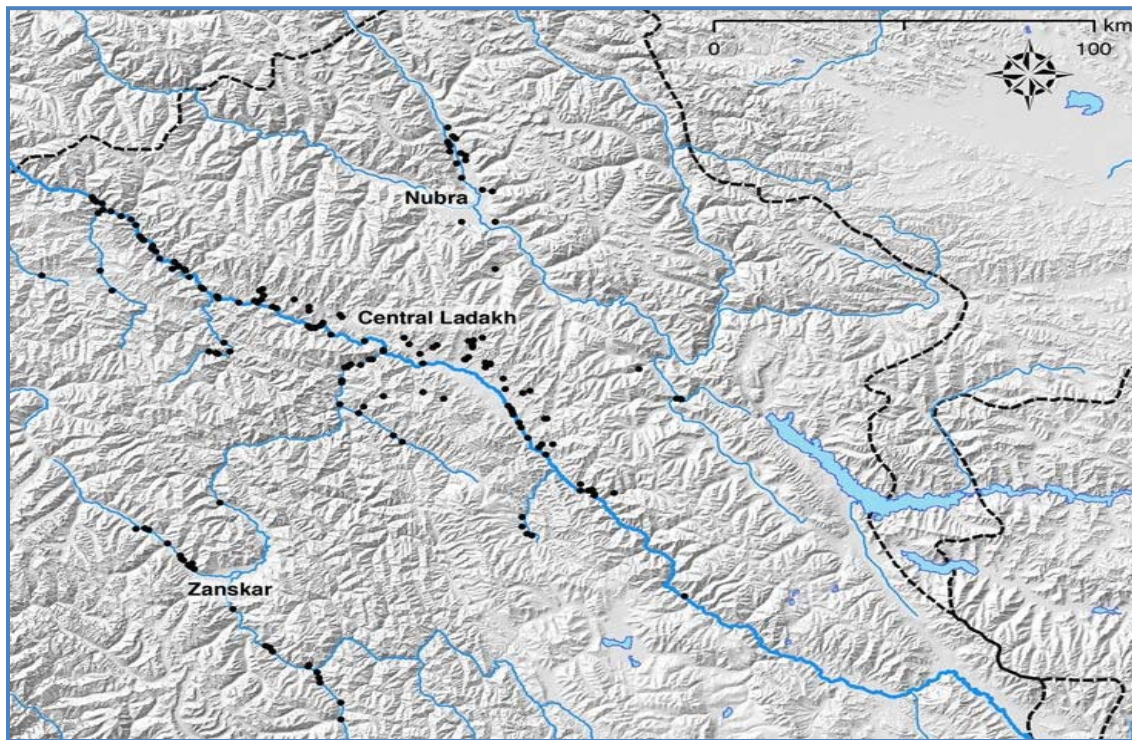


Figure 1: General view of the rock art site of Yaru, Central Ladakh

Since the early 1990s rock art has been also published in the form of articles by Vohra, but the quality of documentation is rudimentary and the location of petroglyphs is, more often than not, erroneous (Vohra 1993, 1994, 1995, 1999, 2005a, 2005b).¹⁷ Other initiatives for the documentation and preservation of rock art in Ladakh were and are still being taken by Jamwal and Thangspa since the mid-1990s but their data is seldom published (Jamwal 200?, 2006; Tshangpa 2007, 2008).¹⁸

The most systematic documentation of rock art in Ladakh was undertaken in 1996 by Vernier, an independent Swiss scholar, who recorded about 10,000 petroglyphs (all registered in a digital database) in Central Ladakh as well as in the Markha (Mar-kha) valley and Zaskar. A résumé of his decade of investigations was published in 2007 in a catalogue, in which one finds for the first time a list of rock art locations (106 in total) as well as a thematic classification of petroglyphs (Vernier 2000; 2007, p. 29-30, p. 63-66).¹⁹ Since 2006, Vernier and the present author have been conducting a joint project dedicated to rock art that has doubled the number of petroglyphs to about 20,000, which are scattered over 158 sites (91 sites systematically documented and 67 surveyed only).²⁰ The most remarkable achievement of the project is the completion, in 2011, of the systematic documentation of the site of Murgi Tokpo in the Nubra valley, the largest known to date in Ladakh consisting of about 3000 petroglyphs (Bruneau *et al.* 2011).²¹ The present author has conducted a comprehensive study of the rock art of Ladakh, including a detailed classification and typological analysis, now awaiting publication (Bruneau 2010).²²



Location of Rock Art Sites

There are three regional divisions of rock art sites in Ladakh: the main one, along the Indus, follows an east-west distributional pattern while the second and third groups have a north-south pattern respectively along the Nubra, and Tsarap and Doda rivers (Zanskar).

Seventy-five percent of the sites are found in proximity to water, either a river or a stream²³. In large valleys the sites are typically located on flat, high alluvial terraces, whereas in narrower ones they are located on the slopes. However, the largest sites are located in alluvial fans favorable to human occupation, such as the sites of Murgi Tokpo and Stagmo (Stag-mo).²⁴ Very few sites are situated in the heads of valleys or on passes. It appears that altitude and climate limited access and use of such places.

The location and accessibility of most rock art sites show that they mark ancient routes. For example, 33 sites are located on the right bank of the Indus and only three on the left bank demonstrating that the former was consistently in use as a transportation conduit.²⁵ At some sites the old track, occasionally with a cobble bed, still winds in between the engraved boulders. Along the track, at specific places, the terrain was cleared and flattened to form small platforms, sometimes sheltered by a hanging boulder or rock face, providing suitable halting places (**Fig.2**). The role of the sites as resting places is reinforced by the fact that most of them (except those on high alluvial terraces) provide direct access to water.

Ten sites or so are located where the Indus river is the narrowest and can be spanned, as the remains of ancient bridges and sometimes contemporary ones testify. The strategic location of these sites is in some instances reinforced by fortified ruins and other material remains such as pottery shards.²⁶ Lhatho (*lha-tho*), *chorten* and *mani (ma-ñi)* walls are also frequently encountered at these crossing places as well as along the ancient tracks, acting as guidance and protection for the traveler.²⁷

Content of Rock Art

The rock art of Ladakh can be classified as either figurative or non-figurative. In total seventy-four motifs have been identified in the rock art of Ladakh, the main ones are discussed below (Vernier 2007 63-66).²⁸ Figurative petroglyphs are, in order of decreasing importance: zoomorphic, anthropomorphic and unidentified.

Zoomorphs

Zoomorphic images constitute about half of the petroglyphs documented in Ladakh. The species represented are, in decreasing order of importance: ibex, wild sheep, yak, canine, caprid, feline, equids, birds, deer, markhor, argali, camel and antelope.²⁹ The ibex, usually recognizable by long backwards-curving horns, accounts for almost half of the zoomorphic images (47%). It is one of the most common wild ungulates found north of the Himalayan ranges (Himachal Pradesh, Kashmir) and in Central Asia (the Pamirs, Tien Shan and Altai) (Schaller 1977 55).³⁰ In Ladakh, the ibex currently extends east to the environs of Leh and north to the Nubra valley. In engravings, it is represented all over the region and is found at almost every rock art site.³¹ Although solitary images occur, it is most commonly represented



in a herd, containing typically from five to ten individuals (**Fig.3**). In some cases the masculinity of the animal, already indicated by the length of the horns, is reinforced by the depiction of ridges along them as well as a beard. In rare instances a male sexual organ is clearly carved. Seasonal behavior can be recognized: in some compositions there are scenes of aggression showing two males locking horns or else with an upward tail indicative of the rut.



Figure 2: Sheltered platform, Kanutse site, Lower Ladakh

Apart from the ibex, wild sheep are also common in the rock art of Ladakh (8.4%). By this term we refer to images of blue sheep (bharal) and urial: both species have massive short horns sweeping up and out, but their representation in the petroglyphs is not distinctive enough to discern between them. Such images are found all over Ladakh. Nowadays the bharal occurs in the whole region whereas the urial only in the Indus valley and the Shyok. As for the ibex, there are solitary carvings of wild sheep but they most often appear in herds (**Fig.4**).

The yak, easily identifiable by curved long horns, conspicuous hump and short tail terminating in a large bushy tuft is third in occurrence in the rock art of Ladakh (7%). Yaks are, more often than not, represented in isolation. When they are part of compositions, they occur along with other individuals of their species or with ibexes. Representations are that of wild yaks: we do not know of any irrefutable representations of domestic yaks (loaded or on a lead for example).

Wild canidae (accounting for 4.5% of zoomorphic images) recognizable by fairly short legs, short upright pointed ears and long tails are difficult to identify with accuracy. Straight tails might be



indicative of foxes or wolves as both species inhabit Ladakh whereas curved tails might point to dogs. Some petroglyphs depict packs of canidae attacking herbivores.



Figure 3: Ibexes in herd, Dargo Dun site, Lower Ladakh (Photograph by Martin Vernier)



Figure 4: Wild sheeps, Bazgo Zampa site, Central Ladakh (Photograph by Martin Vernier)

Other carnivores, and more particularly the snow leopard (1.8%), easily identified by a long thin tail curled at the tip and a spotted body, are depicted in the rock art of Ladakh. Images were only documented in the Indus valley where the snow leopard is still found (**Fig.5**). They are most often represented in pack and only in two instances is the snow leopard shown attacking an ibex or a deer. There are also images of striped carnivores that may represent tigers. Also two, almost identical, carvings of lions were documented in the vicinity of each other at Khaltse (Francke 1902, Pl. II; 1903, Pl. VII.I).³²

The last animals of importance in the rock art of Ladakh belong to the equidae family (4.8% of zoomorphic images). Seventy-five percent of these images display a rider thus identifying the animals as horses. Harnesses are only exceptionally depicted and there are also rare representations of horses on a lead (**Fig.6**). However, anatomical details are not sufficient to identify the type(s) of horse mounts. Unmounted animals with a long neck, long legs and tail may be horses or *kyang*. This Tibetan wild ass inhabits the entire Changthang. Although it is now rare, this species was still common in eastern Ladakh at the beginning of the 20th century (Schaller 1998 163-66.³³ Images of the *kyang* are recognizable by their large head and robust body but most of all by their short and bristly upright mane.



Figure 5: Snow leopards, Sumda Rikpa Bao site, Central Ladakh



Figure 6: Rider and horse on a lead, Sumda Rikpa Bao site, Central Ladakh
(Photograph by Martin Vernier)

Other animals (birds, deer, markhor, argali, camel and antelope) account for less than 1% (each) of zoomorphic engravings. Among birds we can distinguish birds of prey from partridges, quails and affiliated birds. The former are represented with outstretched wings and a hooked beak among other animals (wild sheep, ibexes). Most images of birds of prey are located in the gorges of Zanskar, at the sites of Yaru (Wylie unknown) and Yaru Zampa. It is at these sites that the ten or so examples of horned eagles (*khyung*) known for Ladakh were documented. Other birds are always represented in profile standing on short feet with a rounded belly.



Of interest also are images of deer and Tibetan antelope. Both species currently inhabit some areas of the Changthang and their images suggest a wider distribution in the past, as do those of markhor in the west of Ladakh. This wild goat is now found further west in the Gilgit-Baltistan province of Pakistan and in the Indian Himalaya. Finally, of great significance are representations of double-hump Bactrian camels. Most camel representations, sometimes mounted or on a lead, were documented in the Nubra valley where wild and domestic camels are still found (**Fig.7**).



Figure 7: Domestic Bactrian camels, Murgi Tokpo site, Nubra, Ladakh

Anthropomorphic Figures

Anthropomorphic images form 15% of the carvings. They are rarely depicted in isolation, and most often occur in pairs or groups. Anthropomorphic figures with outstretched or raised arms are common. The latter can be found in front of an ibex or standing on its back. There are also examples of loop-headed anthropomorphic figures standing on horses and that of bowmen standing on yaks. Such scenes occur mostly in lower Ladakh, along the Indus, in the surroundings of Dah. There only we also find rows of anthropomorphic figures (3 to 25 in number) joined by the arms or shoulders in front of which a presiding figure with raised arms is often depicted. Squares or dots may be carved above their heads (**Fig.8**). In this area we also find a wide range of anthropomorphic figures with dots or strokes around their heads or with a beak-like face.

More common are representations of bowmen: they account for nearly 50% of anthropomorphic figures. They are found engraved all over Ladakh and typically show a human figure on foot holding a



bow and sometimes carrying a quiver or bow case at the waist or on the back. Most bowmen are hunters and are depicted chasing or facing their prey (ibex, yak, wild sheep, deer or antelope) and seconded by hounds (**Fig.9**). The bow clearly appears as the favorite hunting device. In some instances it is also used as a weapon but maces, swords and battle-axes are predominant in duel or battle scenes.



Figure 8: Anthropomorph in rows, Tilichang site, Lower Ladakh

Bowmen are rarely mounted but when it is the case they are always hunting yaks. The predominance of hunting on foot could be explained by the rugged terrain, which is not favorable to mounted hunters. Scenes of riders fighting are also rare whereas groups of riders are frequent. In fact 13% of anthropomorphic figures are riders, and horses seem to have been used mainly as a mean of transport. Harnesses are usually not depicted but in rare instances the saddle or reins are shown.



Figure 9: Archers on foot, Murgi Tokpo site, Nubra, Ladakh

Finally, on some sites in Ladakh we find foot and hand prints. They are rarely isolated and in several cases there is a small (child?) print (hand or foot) engraved next to a large (adult?) one (**Fig.10**).



Figure 10: Palm prints, Kawathang site, Upper Ladakh

Material Objects

Another category of engraved representations is that of architectural structures. About a thousand images represent *chortens*. They are in some instances accompanied by dedicatory inscriptions in *sāradā* or Tibetan as at the well-known sites of Tangtse and Alchi respectively (Sander 1994 ; Francke 1906).³⁴ Typically, *chortens* display a tiered base with a staircase topped by a bulbous structure and belong to the 'descent from heaven' (*lhabab, lha-babs*) type (**Fig.11**). In rare instances we find images of plain tiered structures that could represent shrines related to the contemporary *lhatho*.

Non-figurative

Non-figurative motifs form 12% of the rock art documented in Ladakh. They are found at most sites all over the region, but half of them cannot be described satisfactorily and are as such undetermined. Twenty-eight motifs have been identified, the main ones are, in decreasing order of importance: lines, swastikas, quadrilateral signs, circles, crosses, groups of dots, sun, floral signs, 'S' and dots. These signs are rarely found in isolation and are usually engraved in proximity to zoomorphic and anthropomorphic images. However, there are no irrefutable representations of the physical (mountains or sky for instance) or cultural environment (camps or plots of land for example). Buddhist motifs (that are surprisingly rare in the carvings) such as endless knots (*pata*), thunderbolts, vases and conjoined sun and moon can be qualified with certainty because they are still in use and their meaning is known from other cultural contexts (**Fig.12**). Swastikas (mostly clockwise) are found at 23 sites, less than one-quarter of the total rock art sites recorded. Other signs such as the figure 8 and volute along with 'signs in shape of glasses', find their possible origin in Central Asia where they are known in rock art and on objects but their significance is not clear.³⁵ Various unidentified signs and especially those engraved at Tangtse are classified as *tamgas* by some authors because they share traits with signs found on medieval coins that are emblematic of a clan or a person (Vohra 1999)³⁶ (**Fig.13**). However, a systematic contextual and comparative study is needed to confirm this interpretation.



Figure 11: Chorten representation, Alchi Zampa site, Central Ladakh



Figure 12: Signs, among which swastikas, Yaru site, Central Ladakh



Figure 13: Various signs on a surface at Tangtse, Upper Ladakh
(Photograph by Jean-Louis TAILLEFER)

Concluding Remarks

From the above description of zoomorphic images, we note that the species depicted reflect a local fauna dominated by ibexes and wild sheep. These ungulates are still widespread in Ladakh whereas other species such as wild yak, deer and antelope are now found only in the eastern part of the region, in the Changthang. Their representation in rock art might reflect a narrowing of their habitat induced by a change of climate and / or by human pressure. At the Neolithic site of Kiari (circa 900 BCE) in eastern Ladakh remains of goral were found suggesting a modification in game and vegetation conditions since this bovid lives in wooded environments (Ota 1993, p. 103-105).³⁷ All the wild ungulates in the rock art of Ladakh are represented hunted. They are in decreasing order of importance: ibex, yak, wild sheep, deer and antelope. However, hunted animals account for a small percentage of zoomorphic representations. For example the yak is hunted only in a quarter of all images. In hunting scenes the prey is often chased or savaged by one or several dogs. Along with the horse and camel, dogs are the only domestic species definitely represented in the rock art of Ladakh. All the other species appear to be wild. Because of the local fauna depicted we suggest that the rock art of Ladakh was largely created by indigenous peoples.

Nevertheless, petroglyphs are not an inclusive natural history inventory: large animals such as the bear or small mammals like the marmot and pika, which are common in nature, do not occur in rock art. As a consequence, rock art does not attempt to reproduce the region's entire faunal record. Zoomorphic images form a bestiary, that is to say the species carved had special significance for their authors, either economic or religious.³⁸ As noted the ibex is the animal most commonly depicted in rock art: it still



plays an important role in the folk tradition of Ladakh (Dollfus 1988).³⁹ However, at the present state research it is difficult to understand the cultural background of most images since there are few archaeological, ethnographic or textual benchmarks. This remark holds true also for anthropomorphic and non-figurative representations.

Because there is still so much to learn on the past culture(s) of Ladakh from rock art, it needs to be preserved. Unfortunately under economic pressure and the building of infrastructures (dams, roads, etc...) many images reproduced in this paper underwent destruction since their documentation in the last decade. The current author and Vernier, together with local organizations and scholars, are trying to implement a large scale Rock Art Preservation Project in Ladakh, hoping to protect the largest archaeological resource of the region for future generations.⁴⁰

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Endnote

¹ Ujfalvy 1884, p. 248.

² Francke 1902, 1903, 1905a, 1905b, 1905-1907, 1906a, 1906b, 1907a, 1907b, 1914a, 1914b; Francke and Jina 2003.

³ Francke 1925; Sander 1994; Sims-Williams 1993.

⁴ De Terra 1931, p. 47-48 (Pl. 6b, 7). Tucci took a series of photographs but published only one (Tucci 1958, p. 294, Fig.8) showing a boulder with a *kharoṣṭhī* inscription from the site of Khaltse. Tucci's photographs are now in the archives of the Museo Nazionale d'Arte Orientale in Rome and most were published by Orofino (1990).

⁵ De Terra 1940, p. 48: Phase I: before 1000 BCE (prehistoric magical art with isolated stylized men and animals early ibex hunters.); Phase II: 200 BCE and later (early Buddhist sculptures with *kharoṣṭhī*, *brāhmī* and *śāradā* inscriptions, swastika); Phase III: 4th and 5th centuries CE (Dardic ibexes and other hunting scenes, conventional human figures); Phase IV: 15th century till present ('lamaist' subjects, chorten, naturalistic animals and human images). Apart from style, De Terra also takes into account the weathering of the images and the technique of engraving. However, his criteria are rather vague and there are obvious gaps in the chronology. He proposes a sub-phase (a) dated from 800 CE (in which he places Nestorian inscriptions and crosses as well as the Tokharian inscription from Tangtse along with, strangely, *kharoṣṭhī* inscriptions), showing that the chronology he proposes is insecure.

⁶ Snellgrove and Skorupski 1977, p. 15: "With the possible exception of simple rock-carvings of animal forms [...] there is nothing within the purview of this volume that can be regarded as wholly indigenous to Ladakh."

⁷ Denwood 1980. Apart from Francke's publications, the other articles dealing with Tibetan rock inscriptions in Ladakh are: Denwood 2007; Denwood and Howard 1990; Orofino 1990. For a list of Tibetan rock inscriptions in Ladakh and bibliographical references: Iwao *et al.* 2009, p. 88-93.



- ⁸ Klodzinski and Gouazé 1982; Peissel 1984. The site in Zanskar is referred to as Cha (*Bca / Bya*), from which photographs were subsequently published by Francfort (Francfort *et al.* 1990; 1992); it corresponds to the site labeled Zamthang (*Zam-thang*) in our documentation.
- ⁹ This article was first published in French (1990), an English version appeared in 1992: Francfort *et al.* 1990; 1992. A summary of this article is found in Chayet 1994, p. 69-70. The same images of petroglyphs from Ladakh were used by Francfort in subsequent articles: Francfort 1992, Fig. 12.2; 1994, Fig. 6, 8. A paper in Chinese by Lü Hongliang (2010), referring to Francfort's publications and the work of other Western scholars, concludes that the western Tibetan Plateau had a close relationship with the artistic tradition of the Eurasian steppe. For further discussion see Bruneau 2013, forthcoming; Bruneau and Bellezza 2013; Bruneau and Vernier 2010.
- ¹⁰ Francfort *et al.* 1992, Fig. 30.
- ¹¹ According to the annual reports of the ASI published in *Indian Archaeology: A Review*, preliminary surveys were conducted in Ladakh in 1975–1976, 1978–1979 and 1981–1982 by members of the Frontier and North-Western Circles: Anonymous 1979, 1981, 1984. The existence of petroglyphs is first reported in 1984–1985 at the site of Saspol (sa spol / sa spo la): Anonymous 1987, p. 147. In 1994–1995 the Srinagar Circle reported rock carvings depicting various hunting scenes and animal figures from Trangste (Tangtse): Anonymous 2000, p. 28.
- ¹² Anonymous 1993, p. 27-29. A short description of the content of the sites and their GPS location is given.
- ¹³ Anonymous 1997, p. 36-38. The sites are: Deskit (Bde-skyid), Khalsar (Khal-gsar), Murgi (Mur-gi), Tirisa (Wylie unknown), Tirath Tirit (Wylie unknown), Kiari (Skya-reng), Litche (Wylie unknown), Niormis (Nyor-mis). A short description of the contents of the sites and their GPS locations is given.
- ¹⁴ According to the report, two separate surveys were led that year (1998–1999): Anonymous 2004. One was conducted along the Indus, between Leh and Batalik as well as along the Suru, Doda and Zanskar rivers under the direction of B. R. Mani from the Srinagar Circle (p. 49-58). In addition to a list of subjects represented, a map with 19 locations (including petroglyphs and Buddhist reliefs alike; p. 55, Fig. 16) and two photographs were published (Pl. 23, 24). A more detailed version of the report was published in *Pragdhara*: Mani 1998. Another survey was conducted by the Excavation Branch V of Vadodara under the direction of R. S. Fonia (p. 59) along the Indus, including its upper course, and along the Shyok and Nubra rivers.
- ¹⁵ Mani 2000–2001, p. 99: for example he links ibex images to a fertility cult.
- ¹⁶ *Ibid.*, p. 107. The chronological sequence, including Buddhist reliefs, is as follows: A) primitive phase-Neolithic and early historical period representing human and animal figures, including hunting scenes, war scenes, dance scenes, symbols, ibex, sheep and goat and other animals. B) Kushan inscriptions in *kharoṣṭhī* and *brāhmī* and continued traits of earlier phase. C) scratching with Tibetan influence depicted through inscriptions of 8th-9th century CE, figures of stūpas and a few human and animal figures. Contemporary gigantic rock carvings with mixed styles having influence from Tibet and Kashmir as well as Central Asia. D) Low relief carvings datable from c. 11th to 17th century CE.
- ¹⁷ Vohra 1993, 1994, 1995, 1999, 2005a, 2005b.



- ¹⁸ Jamwal 2007, 2006; Tshangpa 2007, 2008, forthcoming.
- ¹⁹ Vernier 2000; 2007, p. 29-30, p. 63-66.
- ²⁰ They were joined for fieldwork in 2007 and 2011 by Quentin Devers, a Ph.D. candidate in archaeology at the École Pratique des Hautes Études, Paris.
- ²¹ Bruneau *et al.* 2011.
- ²² Bruneau 2010.
- ²³ This percentage and all numbers given below are based on the analysis of the 91 rock art sites systematically documented by Vernier and Bruneau.
- ²⁴ Most sites are formed of erratic granite boulders of various sizes covered by an orange-brown varnish scattered over a flat or sloped surface. Sometimes they also consist of dark reddish volcanic slabs. Exceptionally, we find petroglyphs on sandstone rock faces.
- ²⁵ As any archaeological map, the spatial distribution of rock art sites reflects the state of research at a given time. Other sites may be discovered on the left bank of the Indus in the future but the great difference in numbers is significant.
- ²⁶ The dating of fortified remains and pottery in Ladakh is beyond the scope of this paper; whatever their antiquity they are testimonies of the strategic importance of the sites. A comprehensive study of the fortified remains of Ladakh is currently undertaken by Quentin Devers. The only substantial publications on the subject to date are: Howard 1989, 1995. Regarding pottery as the basis of archaeological study, no systematic analysis was ever conducted for Ladakh. Only a preliminary article on the subject is available, see Howard 1999.
- ²⁷ *Lhatho* are tiered ritual structures (sometimes topped by juniper branches arranged in a bundle) enshrining protective deities.
- ²⁸ This classification was built by Bruneau on the basis of that elaborated by Vernier (2007, p. 63-66). The figures given below are based on the statistical analysis of 13597 petroglyphs systematically documented in Ladakh.
- ²⁹ Out of 13597 images 7270 are zoomorphic images (53%). For about a quarter of zoomorphic images the species is unidentified.
- ³⁰ Schaller 1977, p. 55.
- ³¹ Images of ibexes are found at 83 out of 91 sites.
- ³² Francke published hand drawings of these carvings, see Francke 1902, Pl. II; 1903, Pl. VII.I Documented *in situ* in 2006 they were subsequently cut down and moved to the garden of a guesthouse (2008) in Khaltse.
- ³³ Schaller 1998, p. 163-66.
- ³⁴ For the *śāradā* inscriptions of Tangtse: Sander 1994. For the Tibetan inscriptions of Alchi: Francke 1906; Francke and Jina 2003; Denwood 1980, 2007; Denwood and Howard 1990; Orofino 1990. See these references and Bruneau 2011 for images of *chortens*.
- ³⁵ S motifs are discussed in the fourth part of the paper. Regarding 'signs in form of glasses' this terminology is that of Central Asian rock art experts to refer to two circles linked by a straight line.



This sign is typical of the rock art sites of Tamgaly and Saimaly-tach (Kazakhstan), where it occurs among zoomorphic and anthropomorphic figures attributed to the Bronze Age. See Mar'jasev *et al.* 1998, Pl. 6.15; Martynov *et al.* 1992, photo 8, 24; drawing 20, 38, 44; p. 34-35.

³⁶ Vohra 1999.

³⁷ Ota 1993, p. 103-105. On the vegetation and game conditions in relation with Neolithic sites in Ladakh: Ganjoo and Ota 2012, p. 34.

³⁸ These types of observations have been made for rock art in general. See Bahn 2010, p. 42.

³⁹ On the folk significance of the ibex in Ladakh: Dollfus 1988. The ibex is present in oral traditions and rituals of several peoples in the Pamirs, Hindukush, Iranian plateau and Caucasus but absent from other areas of Tibetan culture. According to Dollfus, the ibex highlights cultural exchanges between Ladakh and Central Asia (*ibid.*, p. 136). On the interpretation of the significance of the 'mountain goat' in the rock art of Ladakh see also Aas 2009.

⁴⁰ To learn more about this project and support it please visit <http://tedahl.org/projects/rock-art-preservation/>. On the destruction of rock art see Vernier and Bruneau 2013; Vernier and Sharma 2011.