

# *Preceramic Rock Art in Bolivia*

## *A Preliminary Approach*

*In the first decade of activities by the Bolivian rock art research society, 1987-1997, focus of research was on recording numerous sites and analysis of Colonial rock art. Only quite recently has some progress been made in preliminary sequences of Pre-Hispanic rock art traditions. Defining the earliest rock art in Bolivia is hampered by limited archaeological research, particularly concerning the Archaic period, and lack of excavations in rock art sites.*

*Projects in five regions have come up with entirely different results of early rock art traditions: ancient cupules in Mizque (department of Cochabamba), abstract incisions near Lake Titicaca (department of La Paz), negative handprints (stencils) in caves of Mojocoya (department of Chuquisaca) and Paja Colorada (Vallegrande, department of Santa Cruz), as well as representation of wild camelids and hunters in rock paintings of Betanzos (department of Potosí). The diversity of early prehistoric rock art in Bolivia points to different independent developments shared with other South American regions.*

**B**olivian archaeologists have scarcely reported on Preceramic sites. During its first decade of activities (1987-1997), the Bolivian Rock Art Research Society (SIARB), started research by recording and analyzing Colonial and Republican petroglyphs and rock paintings. Only quite recently has progress been made in defining Pre-Hispanic traditions.

Considering the still limited knowledge of Preceramic rock art traditions in Bolivia, I will first consider the earliest rock art sites in other South American countries which in some way provide a comparative basis for possible ancient sites in Bolivia.

According to latest research and present estimations, the earliest rock art in South America is likely to be more than 10,000 years old. I will not comment here on the controversy of some assumed very early datings in excess of 15,000 years (cf. Rowe 2012) and only refer to a few particularly ancient and well-dated sites are:

Lapa do Boquete, Minas Gerais, paintings with an approx. date of 10,000-9,000 BC (Prous 2012: CD, 727);

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Epullán Grande cave, SW Argentina, with abstract incisions which have a minimum age of 9200 BC (Arias et al. 2012: 805);

rock paintings at Hornillos 2 and Inca Cueva, two sites in Jujuy, NW Argentina are estimated to have started between 8,600 and 6,900 BC (Podestá and Aschero 2012: CD, 774, 786);

Santa Elina, Mato Grosso, Brazil, where the oldest paintings have an estimated age of 8,000-6,000 BC (Prous 2012: CD, 727);

Lapa do Santo, Minas Gerais, Brazil, figurative engraving with an approximate age of 7,400 BC (Prous 2012: CD, 726);

Lapa do Boquete, Peruaçu valley, Minas Gerais, Brazil, deep incised lines dated to approx. 7400-5000 BC (Prous 2012: CD, 723-724); and

Cueva de las Manos, Patagonia, Argentina, paintings since approximately 7,300 BC (Aschero 2012: 808).

Two different stylistic traditions, iconic and non-iconic, have been found among early rock art in NW Argentina (Podestá and Aschero 2012) for example. In general there are at least three traditions evident in early South American rock art which also appear in Bolivian rock art:

abstract designs in the form of incisions (Arias et al. 2012, Prous 2012, Lasheras et al. 2011)

hand stencils,

painted representations of wild camelids and other animals, frequently in hunting scenes.

Regarding the latter, camelids and hunting scenes in paintings related to early hunters, have been noted: in several regions of Peru – the

south-east (Hostnig 2012a), the south (Hostnig 2009), and the southwest (Hostnig 2012b) –, in northern Chile (Sepúlveda 2008), in north-west Argentina (Yacobaccio et al. 2012) and in Patagonia (Aschero 2012). While some early researchers, such as Juan Schobinger (1995), tried to define some general features in the art of the ancient hunters, we are now aware of considerable variety in size and style of these representations and must assume different independent developments.

### THE EARLIEST ROCK ART IN BOLIVIA

In the present state of research we are far from understanding early rock art traditions in Bolivia. This is in part due to limited archaeological surveys and research, particularly concerning the Archaic, and lack of excavations in rock art sites.

The Preceramic period is the least known time period in Bolivian archaeology (Rivera and Strecker 2005: 13). As Capriles and Albarracín-Jordan (2012) point out, research on the earliest human colonization in all regions of Bolivia lags behind research carried out in neighboring countries. Most reports on Archaic sites are still based on unsystematic studies of lithic material collected in superficial surveys, without excavations. These finds have been related to periods and typologies established in neighboring countries such as Chile and Peru.

However, research in the last ten years has provided a wealth of information on a number of sites and includes the first reliable C14 dates available. José Capriles and Juan Albarracín-Jordan (2012) presume that significant human presence existed in the Bolivian highlands as early as 11,000 BC although most available data refer to much later sites, at least 6,000 BC for human inhabitants in the inter-Andean valleys and Chaco lowlands of southern Bolivia.

Very few sites have been reported with Archaic lithics and rock art (for example Abrigo Clemente, Mauri river valley, Dept. of La Paz – see



Figure 1. Preceramic rock art sites in Bolivia mentioned in the text:

- |                                     |   |
|-------------------------------------|---|
| 1- Mizque, Cochabamba department.   | 2- Puerto Acosta, La Paz department.                  |
| 3- Mojocoya, Chuquisaca department. | 4- Paja Colorada, Vallegrande, Santa Cruz department. |
| 5- Betanzos, Potosí department.     |   |

Arellano & Kuljis 1986; and the valley of Mar-kanasa, near Charaña and the Bolivian-Chilean-Peruvian border - see Jiménez, in preparation). It seems typical of the present situation that the map of Archaic sites published in Capriles and Albarracin-Jordan (2012) does not take into account the recent SIARB project in the region of Betanzos, Dept. of Potosí, which relates archaeological sites and rock art. It is obvious that many more data exist which have to be considered and much more intensive research has to be carried out to integrate early rock art traditions into the archaeological framework.

At present we can define several rock art traditions which can tentatively be ascribed to the Preceramic period, specifically the Archaic, but in most cases, they lack dating and do not have an archaeological context. In considering these different types of early rock art, I will start with carvings and deal first with cupules, then present abstract incisions; in the second part I will present rock paintings (hand stencils, wild cam-elids and hunting scenes).

### ANCIENT CUPULES

Several types of cupules exist in Bolivia with different forms and sizes. Some 15 years ago SIARB published a first survey of cupules in departments of Tarija (Methfessel 1998) and Cochabamba (Querejazu L. 1998).

Robert Bednarik (2001, 2010) studied cupules found at Inca Huasi site in the Mizque valley of Cochabamba department, above the Uyuchama river, on the lowest of a prominent quartzite dyke. He estimated their antiquity based on microerosion and distinguished three phases of cupule production. He could not establish an exact date for the first phase and supposes that this tradition “seems almost as old as the time when the dyke was initially exposed to fluvial action. While this provides no numerical value of age, the dyke may have been first exposed during the final Pleistocene or early Holocene” (Bednarik 2001: 282 – see also the report on this



Figure 2a,b. Cupules at Inca Huasi site in the Mizque valley of Cochabamba department. Photos: a. Roy Querejazu Lewis – b. Robert Bednarik.

research in Querejazu L. 2001: 99-108).

Recently Adán Umire (2012) presented the results of his research on cupules in the northern section of the Lake Titicaca basin, Peru. As this area is near the border with Bolivia, I believe that his findings have a bearing on cupule sites in Bolivia as well. Umire distinguishes between three types of cupules according to the rock surfaces used:

Cupules on vertical and inclined walls of rock shelters and small caves which he associates with the Preceramic period based on finds of Preceramic lithic artifacts in the same sites.

Cupules on isolated rocks, found near Formative settlement sites.

Cupules on horizontal rock outcrops found near Late Intermediate sites.

Cupules at some sites on the Bolivian side of Lake Titicaca are similar to those found by Umire and ascribed to his first group which he believes to be Preceramic. In general it may be doubted whether the location of cupules on walls of rock shelters, isolated rocks or rock outcrops always indicates a specific type and antiquity, but the association with dated contexts is definitely important.

In conclusion, the issue of defining early cupule

traditions is complicated and to my mind has to be confirmed in a multidisciplinary approach including excavations and related archaeological finds. As indicated, cupules were produced over a very long time in Bolivia as well as the neighboring country of Peru. So far, we have more late datings than early ones; see, for example, the recent publication by Jean Guffroy (2012) of petroglyphs and cupule rocks at Checta, central Peru, dated to the Early Intermediate Period (200 BC – 600 AD). Much more research is needed to define ancient cupule traditions.

### ABSTRACT INCISED FIGURES

Abstract incised figures belong to the oldest rock art traditions in South America, as proven in the case of Epullán Grande, SW Argentina (Arias et al. 2012) mentioned above.

Recent surveys in the Lake Titicaca basin in Peru as well as Bolivia established abstract incised figures as the oldest phase of rock engravings (Strecker and Paredes 2006; Strecker and Hostnig 2012). Engravings within Pata Pata

cave, Puerto Acosta, on the north border of the lake, near the Bolivian-Peruvian frontier, were first reported by E. Surco (2009) and recorded by M. Strecker in January 2012. This site provides a singular possibility of research with regard to stylistic changes and chronology due to the occurrence of three types of rock carvings. Apart from abstract incisions, there are cupules and a feline head carved in low relief (Late Formative or possibly Middle Formative). Some of the cupules and the feline sculpture are superimposed on the incised figures. Another site near-by features a cupule with added incisions forming a “sun”-like figure.

Incised engravings at the two Bolivian sites and several sites registered in Peru vary regarding depth of the figures: some are quite shallow, others much deeper. Motifs present straight parallel lines, rectangular grid figures, and “star” figures.

The relative antiquity of these designs at Lake Titicaca sites in Peru and Bolivia is evident by superpositions of other elements (see table below).

**Table 1. Abstract incisions in rock art sites of Lake Titicaca and superimposed elements**

Site	superpositions	suggested chronology
Pata Pata	feline head	Formative period
	cupules	Formative period?
Qarqa Haque	cupules (and vulva figures)	Formative period
Cutimbo Chico	black paintings	Late Intermediate period
	red paintings	Late Intermediate period?
	rectangular depressions	Formative period?

At Punta Negra in the Atacama coastal region of north Chile very similar abstract incisions occur which are ascribed to the Middle Archaic (Núñez Henríquez and Contreras Neira 2012). These petroglyphs occur on a rocky outcrop and have not been dated. A habitation site and *conchal* in the immediate surroundings are dated to 5.849  $\pm$ 40 BP and 4.680  $\pm$ 40 BP respectively (Rodolfo Contreras, pers. comm.).

According to Cipolla (2005) and Stanish (cited in Stanish and Umire 2004: 7-11) the Archaic



Figure 3. Abstract incisions, Pata Pata cave at Puerto Acosta, La Paz department. Note superimposed cupules created on top of the incisions and, on the lower right side, Formative feline head. Photo: M. Strecker

period in Lake Titicaca basin is divided in the following phases: Early Archaic (8,000-6,000 BC), Middle Archaic (6,000-4,000 BC), and Late Archaic (4,000-2,200 BC). Taking into account the chronological association of incised abstract designs in northern Chile, I assume tentatively that these designs in the Lake Titicaca region belong either to the Middle or Late Archaic. As no controlled excavations have been carried out at the sites (1), the context of rock art and site use must still be investigated. Starting in the 1990s, numerous Preceramic sites were registered in the western part of the Lake Titicaca basin (Klink 2005, Stanish and Umire 2004: 10, Cipolla 2005: 61), while on the Bolivian side of the basin, intensive research on Archaic sites is still missing and only a few Archaic finds have been reported (Lémusz 2001: 191). There is definitely a high research potential with regard to the Archaic sites of the region.

#### ANCIENT HAND STENCILS IN BOLIVIA

In 1965 Dick Edgar Ibarra Grasso published his pioneering book “Prehistoria de Bolivia” and pointed out the existence of negative handprints at sites in the **Mojocoya** region, department of Chuquisaca. He compared them to Patagonian rock art and considered them to be of equal antiquity. At that time, researchers had a preliminary chronological understanding of hand stencils in Patagonia associating them with ancient hunting scenes and hunter-gatherers of the Late Pleistocene. Since then, we know that the hand images persisted over a long time until approximately 2,500 years ago (Podestá et al. 2005: 29).

In the 1980s Roy Querejazu Lewis, accompanied by Edmundo Salinas, visited the site Huerta Mayu in the region of Mojocoya and still found two stencils, as well as several positive handprints, and a cross-like white design (Querejazu L. 1985). A recent report (Capriles et al. 2008) confirmed the existence of a few stencils at Huerta Mayu site, but did not provide any clues to their chronology. The new recording was not carried out in a systematic way and consisted



Figure 4. Location of regions with hand stencils in South American rock art (Patagonia: Argentina – Chile, Bolivia)



Figure 5a,b. Hand stencils at Huerta Mayo, Mojocoya, Chuquisaca department, Bolivia. Photos: Orlando Tapia.

only of photos which reveal that the site has been vandalized. Unfortunately no archaeological research has been carried out.

Research at another site with hand stencils in a different region, **Paja Colorada** cave (Vallegrande, department of Santa Cruz), provided more detailed data and the recognition of a sequence of rock art traditions, with hand images as the first phase. The site was first reported in 1997 by Roland Félix. Two years later, a SIARB team visited Paja Colorada to carry out a preliminary partial recording (published by R. Querejazu L., 2001: 119-130). Systematic recording was undertaken in a project in 2006-2007 which included the analysis of superimpositions (by Freddy Taboada, cf. Taboada 2008), an archaeological survey and a small excavation in the cave (by Claudia Rivera and Sergio Calla), conservation measures (analysis of conservation status, cleaning of graffiti by Freddy Taboada), analysis of pigment samples (by Ian Wainwright and Mati Raudsepp, publ. 2008), installation of a fence closing the entrance (by Carlos Kailer), signage, training of site stewards (by Pilar Lima), publication of a guidebook for visitors (by Matthias Strecker), and the proposal for a

management plan (by Freddy Taboada and Matthias Strecker). Robert Mark (Rupestrian Cyber-Services, USA) supported this work with a new photographic recording (Mark 2008).

In his systematic survey, recording and analysis of Paja Colorada rock art, Taboada (2008) registered 38 white hand stencils, among a total of 131 motifs. He established a preliminary



Figure 6. Hand stencil at Paja Colorada cave, Vallegrande, Santa Cruz department, Bolivia. Photo: Roland Félix.



Figure 7. Hand stencil at Paja Colorada cave, Vallegrande, Santa Cruz department, Bolivia. Photo: Roland Félix.



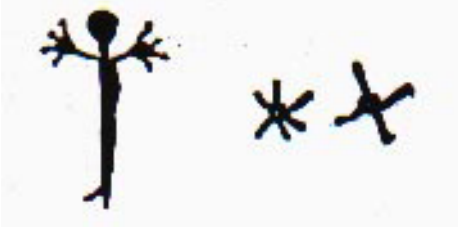
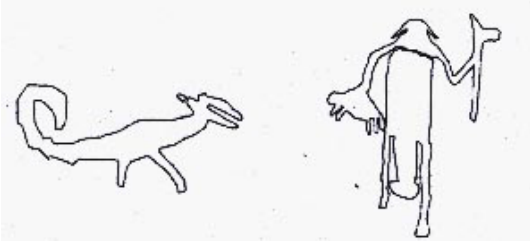


sequence of rock art based on superposition of elements, defining six phases (without considering engravings and cupules which could not be related to this sequence). In all recorded cases, hand stencils represent the first phase, followed in the second phase by other stencils of abstract designs (which apparently is the first case of these images to be reported for South America). While these two phases may be Archaic, the following traditions are likely to be much more recent. The sequence ends with a Christian cross executed during the Colonial or Republican period.

A limited excavation in the cave unearthed rests of two hearths. AMS dating of charcoal (ANSTO Laboratory, Australia) yielded dates with ranges between A.D. 250 - 900, which according to our judgment do not correspond to the first rock paintings at the site, which would have been produced thousands of years earlier.



Figure 8. Rock paintings, Paja Colorada cave. Note superposition of animal figure on hand stencil. Drawing by Freddy Taboada.

**Table 2. Sequence of rock paintings at Paja Colorada (after Taboada 2008)**

<p>First phase: hand stencils</p>	
<p>Second phase: abstract representations (produced as stencils)</p>	
<p>Third phase: Anthropomorphic and abstract figures in red color</p>	
<p>Fourth phase: zoomorphic and anthropomorphic figures in white color</p>	
<p>Fifth phase: zoomorphic bichrome figures (white-red)</p>	
<p>Sixth phase: a Christian cross in black color</p>	

## PAINTINGS REPRESENTING WILD CAMELIDS AND HUNTERS

Archaic rock paintings representing wild camelids (guanacos or vicuñas) and hunters occur in several parts of the Andes (Peru, Bolivia, northern Chile, northwest Argentina) and, as mentioned above, in Patagonia. There is considerable stylistic variety regarding the characteristics of camelid figures, such as their size. However, normally they are represented in a naturalistic way and frequently in movement as if trying to escape from hunters. On the other hand, human figures accompanying these animals generally are depicted in a much simpler way as stick figures without facial features. In many cases they are smaller than the animals and may carry weapons, such as spears and spearthrowers.

In Bolivia representations of ancient hunting scenes exist in numerous rock art sites around **Betanzos**, department of Potosí. Some sites were already reported in the 1970s. In the 1980s and



Figure 10. Lik'ichiri cave, a rock art site in the region of Betanzos, Dept. of Potosí. Photo: SIARB archive.



Figure 9. Regions with Archaic art rock art sites featuring wild camelids and/or hunting scenes in south-central Andes (South Peru – North Chile – Bolivia – NW Argentina)

1990s, recording and preliminary reports were undertaken by SIARB researchers (Strecker 1990).

The principal site, Lajasmayu, receives frequent visitation and extensive vandalism had occurred. SIARB proposed a project of archaeological research, topographical survey, recording of rock art, conservation work, training of guides, publication of a guidebook, proposal for a management plan, signage and construction of a trail. Funding was provided by the Municipality of Betanzos and the Ambassador's Fund for Cultural Preservation of the US Government for work carried out in 2008-2011. 24 people participated in various tasks of the multidisciplinary project. As in the case of work at Paja Colorada, Robert Mark assisted with image enhancement of photos (Mark and Strecker 2010).

Lajasmayu rock presents several hundred painted images and was used repeatedly over millennia. It is suggested that the criteria for selecting this particular cliff face might include its high visibility in the landscape, its proximity to the river, and its location along



Figure 11. Lajasmayu rock art site in the region of Betanzos, Dept. of Potosí. Photo: SIARB archive. (Research by Claudia Rivera and Sergio Calla)

an ancient trading route. A preliminary analysis of the sequence of paintings and different traditions, from Preceramic times to the Colonial period has been presented elsewhere (Strecker 1990; Strecker et al. 2009, 2010; Mark and Strecker 2010)

The archaeological survey was carried out by Claudia Rivera, Sergio Calla and assistants. Their team registered 29 archaeological sites with evidences of Prehispanic and Colonial occupations starting with the Preceramic or Archaic period (approximately 8,000-1,500 BC). Of particular importance are Archaic finds in close proximity to the rock art panels (Strecker et al. 2009: 60-63). The idea that the earliest rock paintings are of Preceramic origin is very reasonable considering these finds.

On the other hand, the analysis of superpositions among the rock art (Mark and Strecker 2010) established that the first phase included representations of a hunter armed with spears (2) – very similar to Archaic anthropomorphic figures recorded in Peru (Hostnig 2007: 19, Figure 2; Hostnig 2010: 70-71) – and numerous scenes of small dynamic figures of camelids sometimes surrounded by simple anthropomorphic figures as represented at Lajasmayu and numerous other sites near Betanzos (Strecker et al. 2011: 79, fig. 8-9; Strecker 2012). Curved lines are interpreted as the representation of hunting blinds and also have their counterpart in Peruvian rock art (Hostnig 2010: 68-70; Maita 2005: photos 17-19).

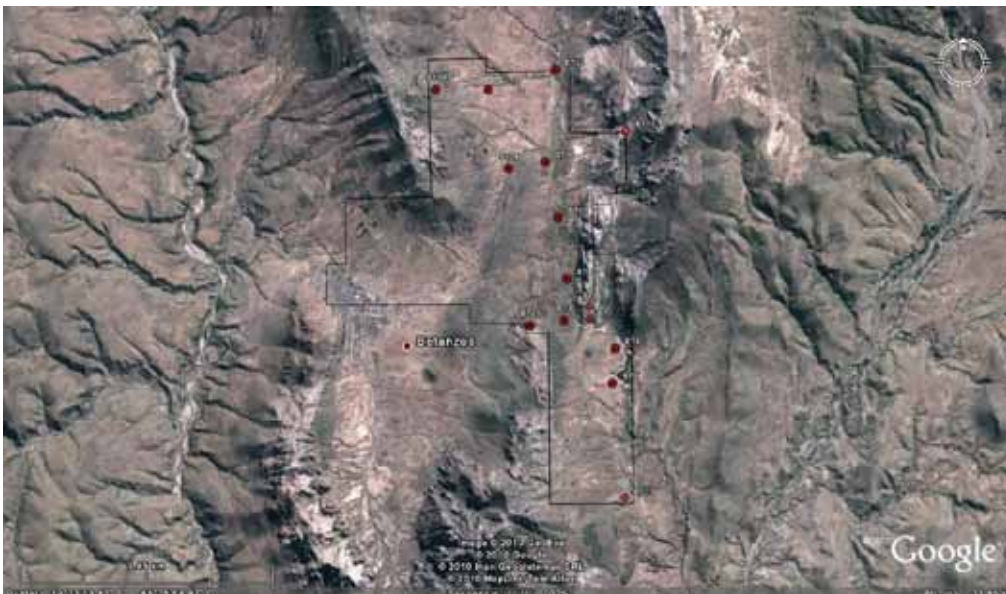


Figure 11. Distribution of Archaic sites (identified by ancient lithic instruments) around Lajasmayu rock.

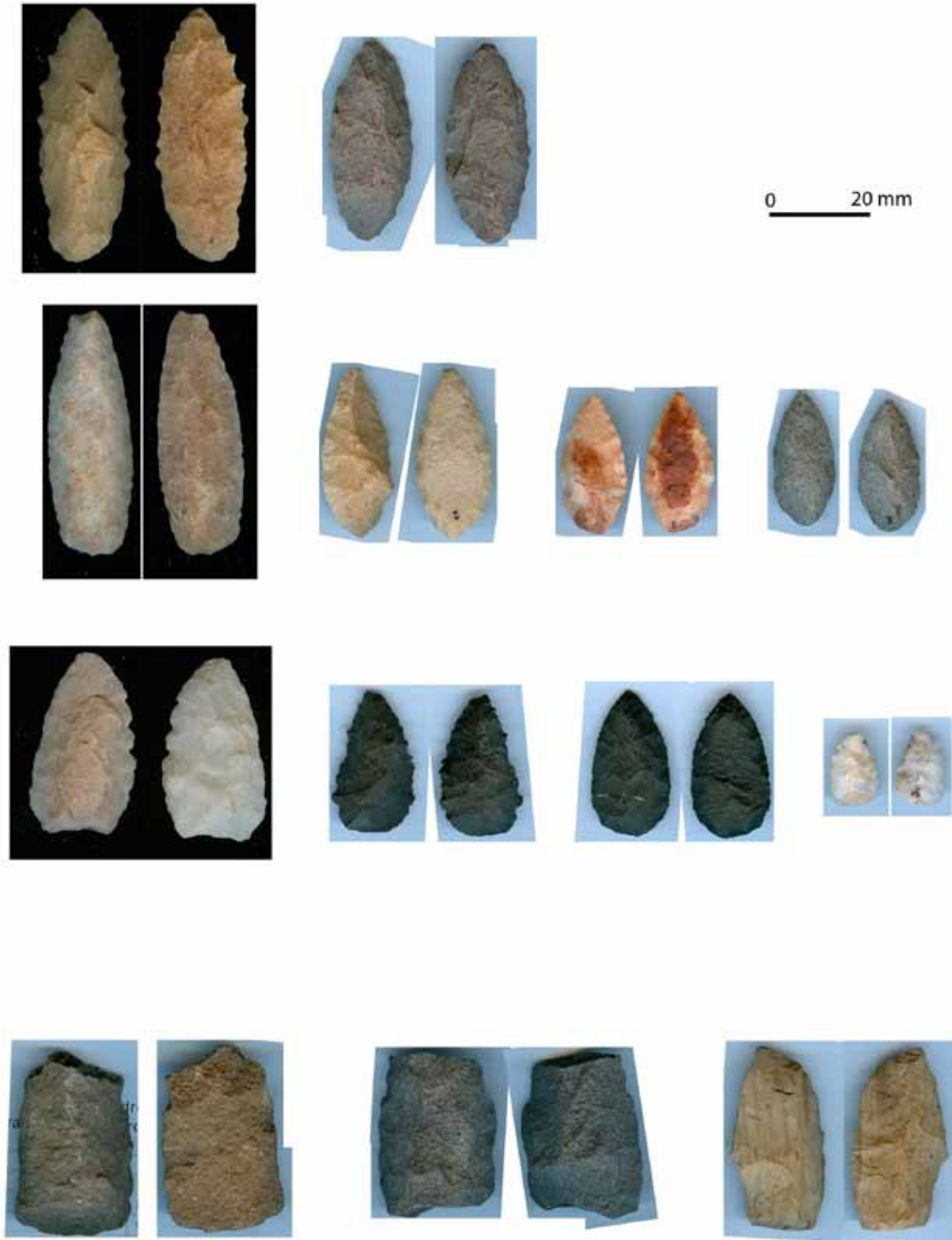


Figure 12. Archaic stone instruments found in the archaeological survey around Lajasmayu rock.  
(Research by Claudia Rivera and Sergio Calla)

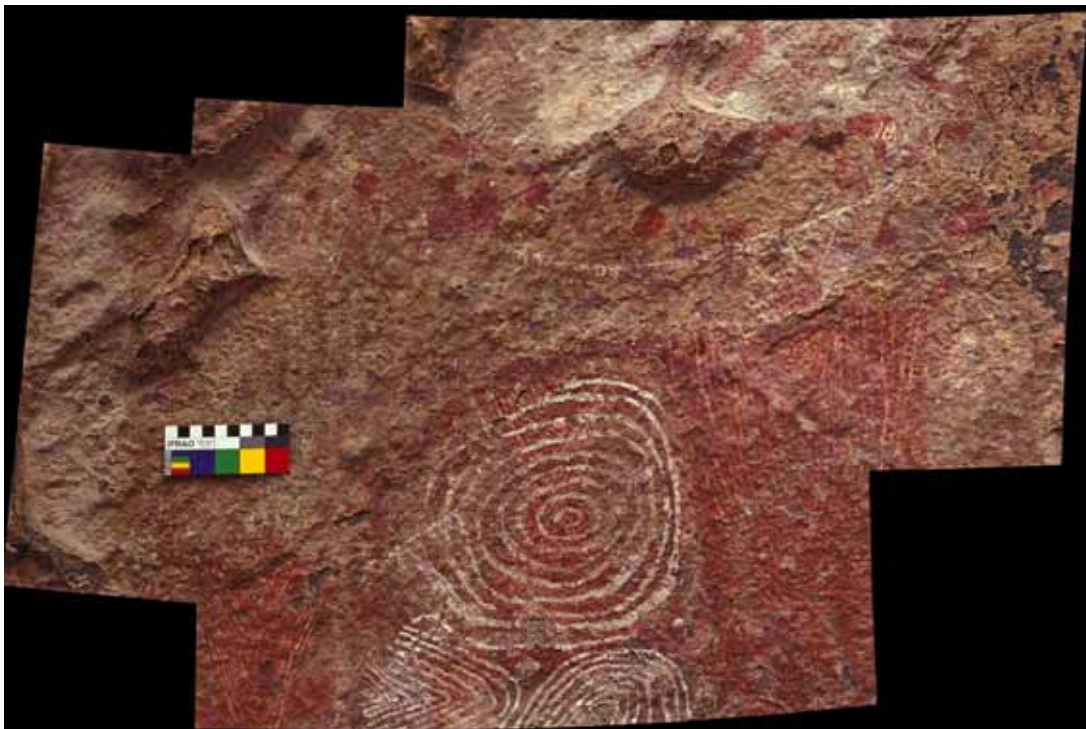


Figure 13a. Rock paintings at Lajasmayu with numerous superpositions (photo: M. Strecker).

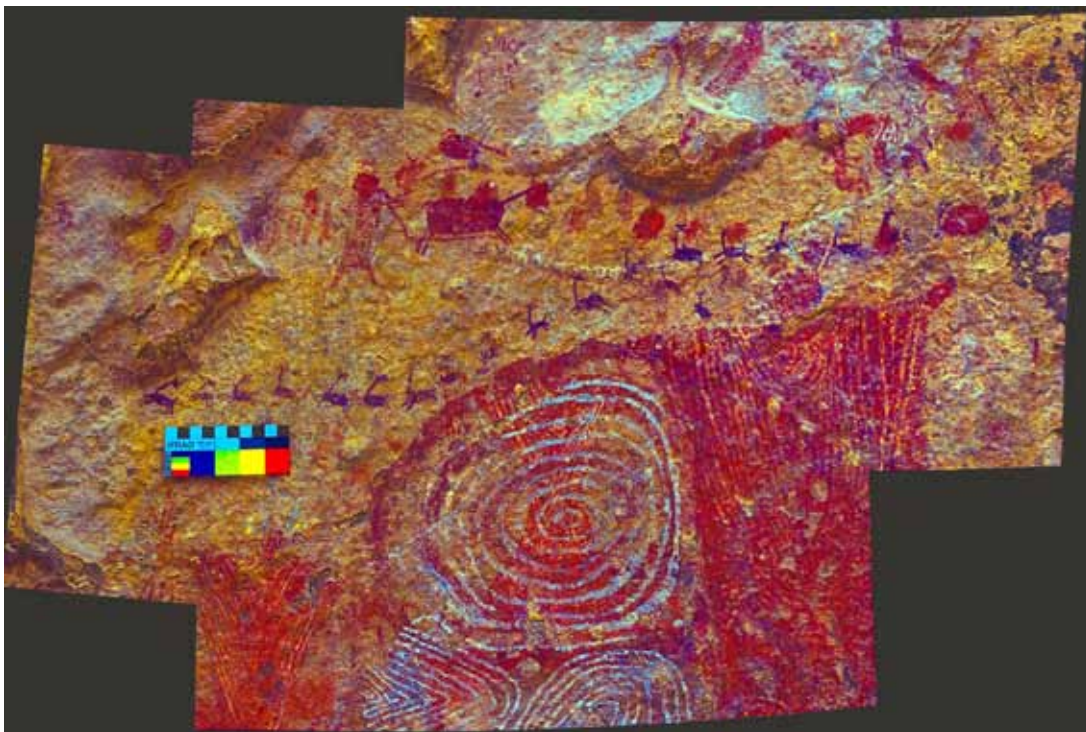


Figure 13b. Rock paintings at Lajasmayu with numerous superpositions (image enhancement by Robert Mark). Note hunter with oblique spears across his body.

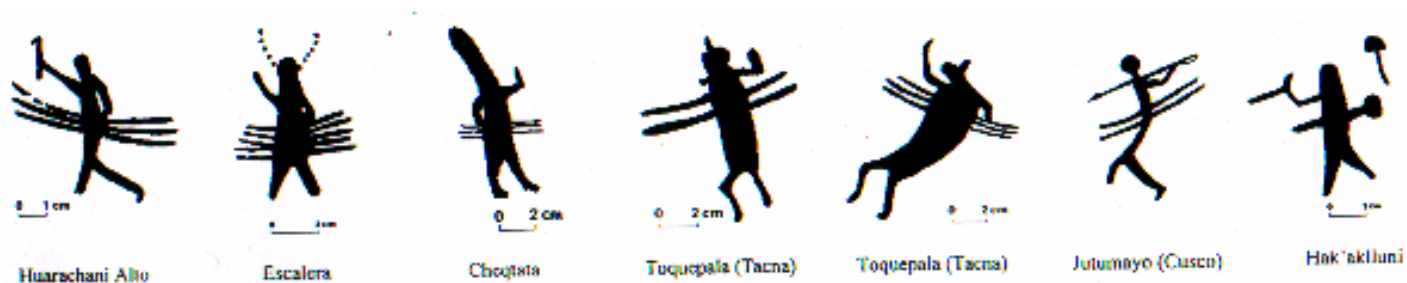


Figure 14. Hunters with spears in rock paintings of south Peru (according to Hostnig 2007: 19, Fig. 2).

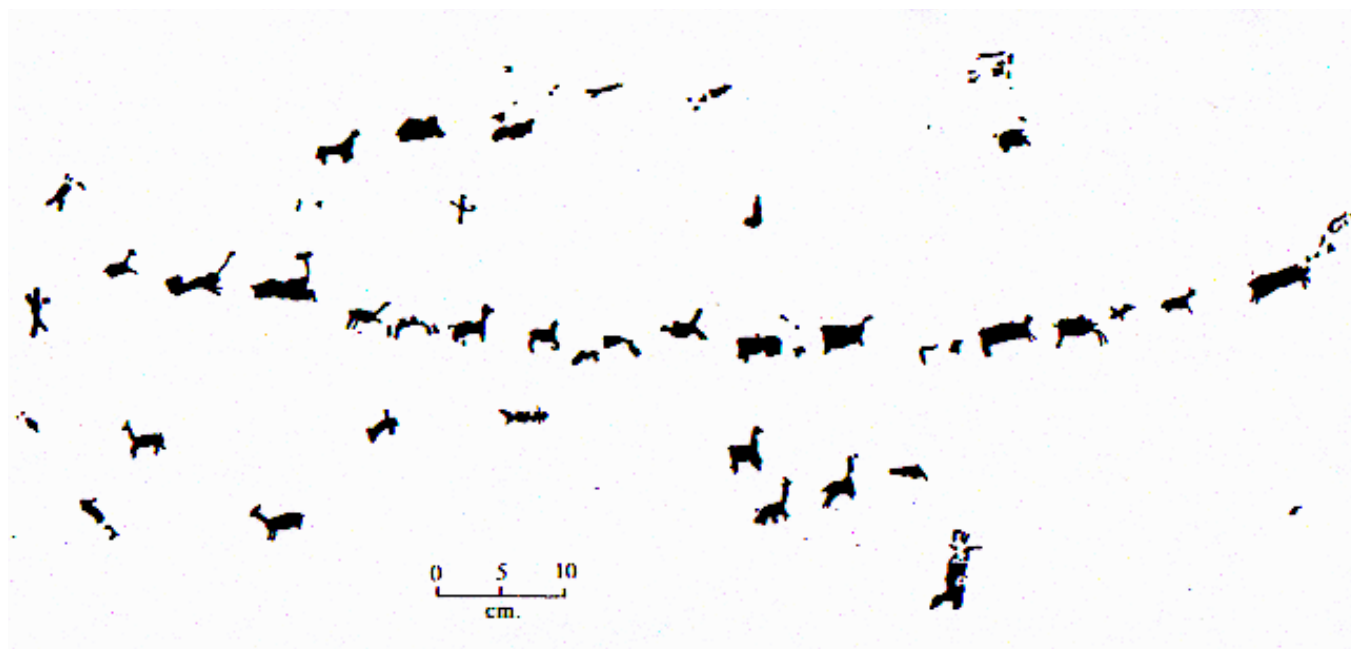


Figure 15. Rock paintings showing wild camelids and hunters at Lajasmayu. Drawing by Freddy Taboada.

## CONCLUSIONS

Research on Preceramic rock art in Bolivia is still in its initial phase. The diversity of early prehistoric rock art in Bolivia points to different independent developments shared with other South American regions.

In this article I have considered cupules, abstract incisions, hand stencils and rock paintings featuring wild camelids and hunters. At present, the rock paintings at Betanzos offer the best case

for understanding ancient rock art production because we have some archaeological background.

The lack of archaeological context is a fundamental problem in assessing Archaic or Preceramic rock art in Bolivia. More intensive research is necessary including excavations at rock art sites. We also need to strengthen relations of the early rock art traditions in Bolivia with those in the neighboring countries such as Peru, Argentina and Chile.

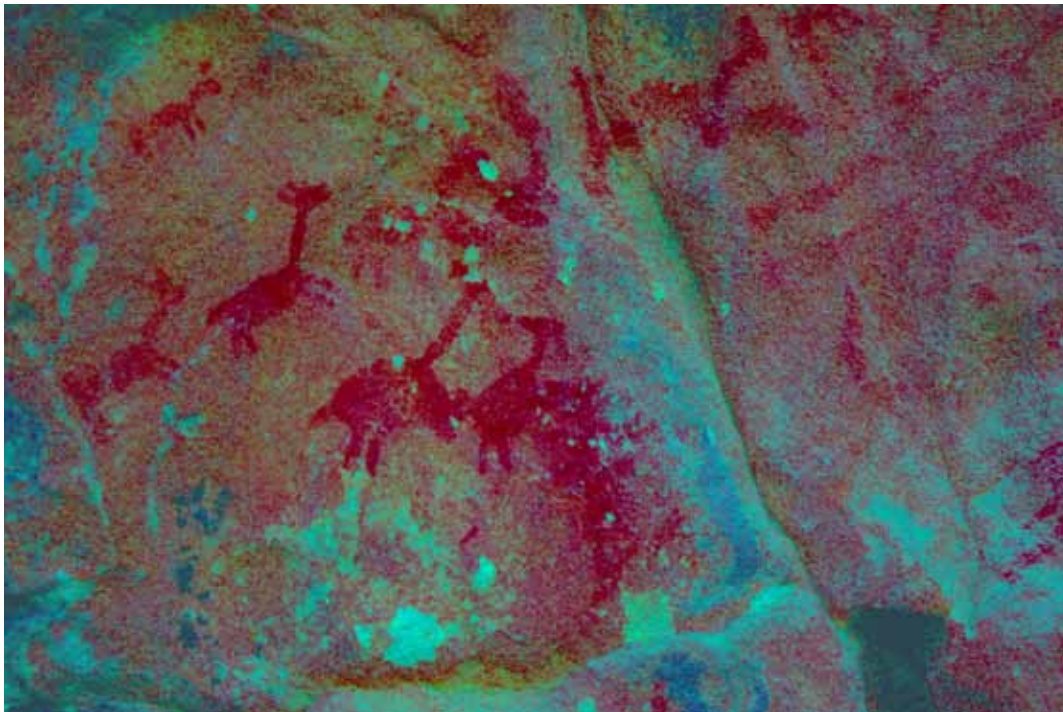


Figure 16. Wild camelids at rock art site near Betanzos. Photo: M. Strecker.



Figure 17. White rock paintings at Lajasmayu showing several layers of superimposed figures, the oldest phase is represented by wild camelids running from left to right toward a barrier or hunting blind. Photo: M. Strecker.

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### Notes

<sup>1</sup>.Archaeological finds were retrieved from rock shelters at Cutimbo Chico, Puno, Peru during work carried out by INC-Puno in 1999 but apparently no excavations took place in these shelters. No Archaic finds have been reported from the site.

<sup>2</sup>.Spears and spearthrowers are not diagnostic for a specific time period in the Andes as they were used from the Archaic to the Inca period. However this particular representation of a hunter armed with spears seems to be exclusive for the Archaic period.

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