

## **Zone 4: West-north-west South America (north of the Andes, Peru, Bolivia, Paraguay)**

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### ***1 Introduction:***

The present study discusses rock art in four countries (Ecuador, Peru, Bolivia, and Paraguay), in different geographical-ecological zones and different cultural backgrounds which make it rather difficult to combine these data in one study. I will outline the present state of rock art research in each country, as far as it is known to me through my personal studies and field work and on the basis of available publications. Conservation and management issues for the four countries are discussed separately, followed by a brief check list of sites of special importance.

### ***2 Rock art of Ecuador:***

Very little rock art research has been carried out in Ecuador as can be seen from a recent survey. Gonzáles Ojeda (publication in preparation) informs about the petroglyphs located in the following regions:

- Northern highlands: petroglyphs near El Angel and in the region of San Gabriel, Carchi province; petroglyphs of Shanshipampa, Imbabura province (Bray 2002);
- North coast: petroglyphs in the region between Santo Domingo de los Colorados and Quevedo;
- Central-south highlands: petroglyphs in Cañar province and Azuay province;
- South Ecuador: petroglyphs in the coastal region of Santa Rosa, El Oro province; petroglyphs in the region of Zaruma; 80 engraved rocks in 22 sites in Loja province;
- East Ecuador: Napo province, Misagualli valley, Amazonian region – 75 engraved rocks as described by Porras (1985); petroglyphs near Méndez; as well as the following sites: Cueva de los Tayos and Chontayacu.

Comparing these data on relatively few sites throughout the country to rock art surveys in the neighbouring countries Columbia and Peru, it is obvious that no systematic rock art inventory has been undertaken in all of Ecuador. Where intensive field work has been carried out, such as in a small region of Napo province and in Loja province, concentrations of engraved rocks have been registered.

Petroglyphs at Shanshipampa (Pimampiro district, Imbaburo province) include two monuments with complex iconography linked by Bray (2002) to the Capulí style (AD 800-1500).

Petroglyphs at Misagualli valley of Napo province feature anthropomorphic and zoomorphic figures, as well as abstract designs and cupules, apparently belonging to a tradition typical of the tropical lowlands.

In 2000, a private university in Loja (UTPL) started a project to investigate, record and preserve rock art within the province of Loja in southern Ecuador. González Ojeda (2004) published preliminary results. He links the petroglyphs in part to an Andean tradition, in part to an Amazonian tradition.

As rock art research in Ecuador has just started, it is not surprising to find that invasive recording methods are still being practised (chalking out of petroglyphs) and that no efforts have yet been undertaken to protect the engraved rocks in archaeological parks.

### **3 Rock art of Peru:**

#### *3.1. Rock art research in Peru*

Rock art research in Peru developed in the 20th century with regional and national surveys. Núñez Jiménez (1986a) published a catalogue of 72 petroglyph sites. In the same year Ravines presented a survey with data of 236 rock art sites throughout the country. 17 years later, Hostnig (2003) published a national register of 900 sites considering petroglyphs, rock paintings, geoglyphs, and, in a few cases, "mobile art in the rock art traditions". Meanwhile, Hostnig has a much more extended database and supposes that at least 1500 rock art sites exist in Peru. He plans to publish a new version of his inventory within the next few years. Hostnig also organized a national rock art symposium held at Cusco in November 2004 (see preliminary report by Hostnig and Strecker 2005) whose publication is in preparation. Another landmark in Peruvian rock art studies is Guffroy's book (1999) based on an investigation of 17 sites with rock paintings and 38 sites with petroglyphs; the author presented a summary of the state of research, a stylistic analysis, a classification according to motif types, and some hypothesis regarding chronology, function and significance of rock art.

According to Hostnig's preliminary published survey (2003: gráfico n° 4), nearly the same amount of sites with petroglyphs (307) and those with rock paintings (403) exist, apart from relative few sites with "mobile art" (69) and geoglyphs (34). The highest rock art concentrations so far registered are in the departments of Arequipa, Puno, Huánuco and Cusco (Hostnig 2003: gráfico n° 3), as well as in the department of Cajamarca in northern Peru where Alfredo Mires (personal communication, March 2006) registered 150 sites. Within the Dept. of Puno, the region of Macusani and Corani have a dense concentration of rock art locations (about 100), investigated by Rainer Hostnig (2005). The departments with the lowest number of registered sites are the following: Amazonas, Ayacucho, Loreto and Madre de Dios. It is very likely that this situation reflects rather the lack of investigations than the lack of rock art sites though apparently the number of sites in the *altiplano* is much higher than in the Amazon lowlands. (The same holds true for Bolivia.)

Guffroy (1999: 19) points out that the number of decorated panels at the sites differ greatly, with particularly high concentrations of rock art at Alto de las Guitarras in the Dept. of La Libertad, Checta in the Dept. of Lima, and Toro Muerto, Dept. of Arequipa (Linares M. 1993).

Geoglyphs occur in seven departments (Lambayeque, Libertad, Ancash, Lima, Ica, Arequipa, and Moquegua), mainly in the regions of Nazca (Aveni 1990) and Palpa (Reindel and Isla 1999, Lambers 2006). The extensive Nazca geoglyphs have been declared World Heritage site by UNESCO and play a major role in tourist industry.

### 3.2. Chronology and stylistic groups

One of the best known examples of an early rock art tradition are the paintings in Toquepala cave, Dept. of Tacna (Guffroy 1999: 26-43); their antiquity has not been definitely established but apparently they date back to 4000 B.C. Guffroy denominates this tradition as “Andean Tradition”, it is also present in many other places in southern Peru (departments of Arequipa, Tacna, Cusco, and Puno) such as the Macusani and Corani region of the Dept. of Puno (Hostnig 2005). Dynamic naturalistic animal representations are combined with stylized human figures often holding objects such as spears. Huntings scenes reveal that camelids were caught in traps, fences or enclosures and hunted in ambush. Rock paintings of Cuchimachay, in the Dept. of Lima, represent dynamic large camelid figures that according to Guffroy (1999: 50) could have been created between 4000 and 2000 B.C.

Guffroy (1999) presents the “seminaturalist style” of rock paintings, also related to hunting activities and possibly of later age; and discusses some late regional traditions related to the Cupisnique and Recuay styles in the Dept. of Cajamarca.

Guffroy distinguishes between four stylistic groups of petroglyphs, the earliest belongs to the Early Horizon, is represented by sites in the north of Peru (such as Alto de la Guitarra) and can be related to Chavín culture. A second group of simpler designs is tentatively associated with the Early Intermediate period (200 B.C. – A.D. 600). A third group, located in the south of Peru, is exemplified by one of the largest petroglyph concentrations, situated at Toro Muerto in the Dept. of Arequipa, investigated by Eloy Linares Málaga (1993), Antonio Núñez Jiménez, Jean Guffroy and, more recently, by Maarten van Hoek (2003). Its dating is controversial, van Hoek agrees with Núñez Jiménez (1986a, b) who ascribes the majority of representations to the local Chuquibamba culture (A.D. 1200-1500).

A fourth stylistic group of petroglyphs is related to jungle tribes, one of the most noteworthy examples is Pusharo in the Dept. of Madre de Dios (Hostnig and Carreño 2006).

Late prehispanic rock art (paintings and charcoal drawings) at Cutimbo in the Dept. of Puno have been ascribed to the local Aymara population. The two sites (Cutimbo Grande, Cutimbo Chico) are linked to the history of the Lupacas and also feature magnificent burial towers (Chulpas) in the Aymara and Inca traditions. The rock drawings include representations of figures carrying *quipus*. Part of the rock art is pre-Inca and stylistically different from the later Aymara complex. On the other hand, the art continued into the Colonial period, and ritual offerings have been placed by the local people till our days revealing that they still perceive these sites as part of their sacred landscape. (Strecker and Paredes 2006)

Colonial manifestations occur in many rock art sites throughout Peru. An especially high concentration of indigenous Colonial rock art has been found in the Espinar Province of Dept. of Cusco (Hostnig 2004). Hostnig (2002) also investigated the use or re-use of indigenous carvings

in rock art tradition in the context of colonial churches and other buildings of the Cusco department.

#### ***4 Rock art of Bolivia:***

##### *4.1. Rock art research in Bolivia*

Systematic investigations on rock art in Bolivia began with the foundation of the Bolivian Rock Art Research Society (*Sociedad de Investigación del Arte Rupestre de Bolivia*, SIARB) in 1987. The society publishes a yearly journal, *Boletín*, and a series called *Contribuciones al Estudio del Arte Rupestre Sudamericano*. It has already organized five international meetings. There is an obvious difference in the quality of occasional rock art research prior to the creation of SIARB compared to new investigations which try to provide a complete recording of sites, taking into account their context. SIARB has passed a Code of Ethics which bans potentially destructive recording techniques, such as chalking out engravings, wetting of rock surfaces, rubbings or moldings; this code also advises against the publication of the exact localization of unprotected sites in popular journals or newspapers, as this could lead to vandalism resulting from uncontrolled tourism.

##### *4.2. Surveys of rock art regions*

SIARB has registered more than 1,000 rock art sites all over Bolivia though mainly in the highlands (*altiplano*) and valleys. So far, few sites have been found in the tropical Amazon lowlands (as in the case of rock art sites in Peru). The map (Fig. 2) shows the distribution of rock art sites in the nine departments. One dot may stand for a single site or a number of sites in the same region. A distinction is made between engravings and paintings though at some sites both techniques have been used; in this case, the prevalent technique has been taken into account.

Concentration of rock art sites occur in the following regions: the Dept. of Tarija and neighbouring regions, such as the San Juan de Oro river and Cinti in the south of the Dept. of Chuquisaca (investigations by Carlos and Lilo Methfessel); the west of Chuquisaca and east of Potosí; central Potosí (investigated by the author); the drainage area of the Mizque river, Cochabamba and neighbouring regions in west Santa Cruz (investigated by Roy Querejazu Lewis and Roland Félix); San José de Chiquitos highlands, Santa Cruz (investigated by Jürgen Riester, Jorge Arellano, Erica Pia and, more recently, by Carlos Kaifler); east Oruro and west Cochabamba; north Oruro (investigated by Roy Querejazu L.); lake Titicaca region (investigated by Freddy Taboada and the author).

Few regional surveys providing an overview of existing rock art traditions have been published. Roy Querejazu Lewis (2001) presented a book on rock art in the river Mizque drainage area. My own research on central Potosí rock art accomplished extensive recording of 12 rock art sites, but has only partially been published (Strecker 2004). A detailed documentation of petroglyphs along Kaka and Alto Beni rivers, in the north-east of Dept. La Paz, by Renán Cordero, Wilmer Winkler and Enrique González, still remains unpublished. Carlos Kaifler (1993, 1999, 2002, 2005) has published complete recordings of rock art sites in Santa Cruz, including drawings of outstanding quality and careful analysis of rock art production, colour, depth of carved figures, patina, motifs, and superpositions.

Apart from rock paintings and engravings, SIARB investigators have studied cupules in several departments: Tarija (Methfessel 1998), Cochabamba (Querejazu L. 1998) and La Paz.

#### *4.3. Chronology and continued use of rock art sites*

Rock art in Bolivia has a long tradition revealing a wide range of stylistic, regional and chronological differences. SIARB proposes the following very rough preliminary chronology:

- Early hunters of the Paleo-Indian period;
- Regional pre-Inca cultures;
- Inca;
- Colonial and Republican period.

It is particularly difficult to establish the exact date of the earliest manifestations. Robert Bednarik (2001b) suggests an early cupule tradition at Inca Huasi, Mizque, which he believes to date back to the final Pleistocene or early Holocene, while later cupules at the same site are estimated to be between 1,500 and 4,000 years old. In my own research on the rock art of Betanzos, central Potosí, I have established a rough relative chronology, based on superposition and style (Strecker 2004). The first phase of paintings is represented by diminutive figures of camelids, painted in dark red colour (later in white), running or jumping in groups; sometimes they are accompanied by stick-like human figures, very stylized in contrast to the animals, and in rigid posture. Later human representations are much larger and comparatively complex. A surprising number of different types of human figures occur, some of which are painted in two colours (Strecker 1990). I assume that these later representations, as well as numerous geometric designs, were created in a period when ceramics and textiles were in use. Superposition of painted elements allow us to recognize five different phases, four of which already belong to ceramic periods. Regarding rock engravings in the same region, similar stylistic trends can be observed, apart from hunting scenes, there are deeply cut concentric circles (presumably created much later). Finally, the last stage for both paintings and engravings are representations from the Colonial period including Christian crosses, horseriders, etc.

In Paja Colorada cave in Vallegrande the earliest representations are negative white hand stencils. To a large extent, later paintings were placed in superposition on top, for example a white stylized figure holding a staff. The next phase of paintings consisted of bichrome animals. The last drawings already belong to the Colonial period. Among the later prehispanic representations there are also engravings featuring a lizard-like animal which can be related to the so-called “Tripatito” tradition in the Mizque basin (rock art and ceramics dating presumably to 1000-1400 AD).

An absence of rock art belonging to the Tiwanaku culture has been noted by several investigators. Petroglyphic figures have been pecked on monumental slabs of the Pumapunku ruins at Tiwanaku, but are believed to have been created after the abandonment of the site by its former population. However, among numerous petroglyphs in the valley of Tiwanaku there are two representations of llama heads with “weeping eyes”, possibly showing an influence of Tiwanaku iconography (Albarracín-Jordán 1991: 39, Fig. 5), while the majority of these engravings are estimated to belong to the late prehispanic “Pacajes” phase, and some date to the

Colonial period. It is a curious fact that the only clear case of Tiwanaku style rock art has been found outside Bolivia, in northern Chile (Berenguer, J., 1999: 33, rock painting at Zurita).

Strecker and Taboada (2004) have recently defined a rock art tradition linked to the prehispanic and later Aymara population of the lake Titicaca region, with different stylistic and thematic trends: geometric or “abstract” elements, schematic camelid figures, ‘religious scenes’ and scenes representing conflicts between armed persons. At least some of the sites, and possibly the vast majority, are considered of particular importance as part of the ritual landscape of the Indians. One of the most impressive Colonial sites has been studied in depth by F. Taboada (1992). It features distinct folkloric dances, pilgrimages to churches with people moving on lines symbolizing paths, etc.

A rare case of Republican rock paintings at Palmarito, in the Andean section of Santa Cruz Dept., has been investigated by R. Querejazu L. (1992). These paintings portray Christian saints which are worshipped by the local population and pilgrims.

The continued use of rock art sites is evident from recent offerings and rites carried out at sites, as in the case of paintings in the Los Andes province of Dept. La Paz investigated by F. Taboada and Korini-3 in the north of Oruro studied by R. Querejazu L. (1994). In both cases, members of the neighbouring indigenous population consider the site part of their sacred realm. Animals sacrificed at rock art sites include llamas and a bull, blood was spattered upon the paintings. Chewed coca leaves were placed on rock carvings and paintings at sites in the departments of Cochabamba and Potosí.

### ***5 Rock art of Paraguay:***

Apparently, rock art research in Paraguay has hardly begun. This may be due to the fact that petroglyphs are still considered testimonies of outside cultural influences and foreign people, for example they are ascribed to Vikings or Celts believed to have visited South America, and are popularly labelled as “runic inscriptions”. These fantastic interpretations have not only been published in a number of very popular books by Mahieu in several languages (for example, Mahieu 1979), but can also be found in school books, press reports, tourist leaflets, and printed government information (Consens 2002: 213).

On the other hand, a scientific recording of rock engravings in Paraguay was published by Pallestrini and Perasso (1984), but this has remained an exception. For an understanding of rock art in the country, unfortunately the investigator has still to consider reports by Mahieu (1972, 1975) which are tainted by his imaginary interpretations.

Rock engravings, such as those of Gasory rock shelter in Amabay Cordillera in East Paraguay (Consens 2002: Fig. 8-9) and Fernández rock shelter in Ybytyruzú Sierra (Dept. of Guayrá or Guaira in South Paraguay, cf. Pallestrini & Perasso: 46-49) represent abstract designs such as parallel strokes, circular forms in a combination of a circle and radiating lines, “grids”, “combs”, undulating lines, etc., apparently with the occasional inclusion of very stylized lizard-like creatures. Consens (1994: 153) considers that morphologically these representations are closely related to the rock art in the central area of Brazil.

## ***6 Observations on recording and research:***

Recording of rock art in the area is generally done by taking photos. A trend towards a more detailed documentation is obvious in the last years, including location maps and drawings.

Unfortunately, invasive and potentially destructive recording methods, such as chalking and wetting rock art, are still practiced by many investigators. However, in the last ten years rock art researchers have become aware of the necessity to respect the integrity of sites and not interfere with the rock art in any way. There is also a trend towards a complete and systematic recording of sites (Taboada & Strecker, eds., 2002).

As noted in the cases of Ecuador and Paraguay, rock art research should be intensified in order to achieve national inventories.

## ***7 Conservation and management issues:***

Rock art sites, which in some cases have been preserved over thousands of years, are extremely vulnerable like all open-air sites. Their conservation depends on natural deterioration factors, explained by Bednarik (2001a: 84-92) such as moisture, physical weathering, biological weathering, pictogram deterioration, climate; as well as “anthropogenic deterioration” (ibid.: 97-102), the destruction of rock art by human visitors. Destruction of rock art sites in the four countries considered in this study is mainly due to anthropogenic damage.

In theory, rock art sites are protected by state legislation as part of the nation’s cultural heritage. However, reality is very different because of the lack of enforcement of existing laws. In consequence, if rock art sites are destroyed actions are seldom taken. Two examples from Bolivia: Civil authorities took legal action against a mining company responsible for the destruction of petroglyphs due to the opening of a road, but the case was soon abandoned. The company argued that it was not aware of the importance of the petroglyphs. No legal action was taken in the case of the complete destruction of a petroglyph site by lumberjacks in the Dept. of Beni, although the council of the indigenous group Chimane requested an official investigation. (Strecker & Taboada 1999: 37)

Some sites have received the status of National Heritage such as rock art sites of Macusani and Corani (Dept. of Puno) in Peru, Calacala (Strecker and Taboada 2001) and Incamachay in Bolivia. The geoglyphs of Nazca / Peru (Aveni 1990; Hostnig 2003: 173-175) and the sculptured rock at Samaipata, Santa Cruz/Bolivia (Meyers 1993, 1998) have been inscribed in the list of World Heritage sites by UNESCO. There are numerous other sites of particular significance in the region, such as the petroglyphs of Toro Muerto, Arequipa/Peru, one of the largest rock art sites which has attracted visitors and scientific studies since the 1960s (Núñez Jiménez 1986b; Linares Málaga 1993; Hostnig 2003: 62; van Hoek 2003); the extraordinary petroglyphs of Pusharo in the Amazon region of Madre de Dios Dept. / Peru (Hostnig and Carreño 2006), and the spectacular rock art of Macusani and Corani, Cordillera de Carabaya, Puno/Peru (including ancient hunting scenes) which I particularly recommend to be considered for World Heritage status (Hostnig 2003: 297, 304-305, 307-311, 313-317, 319-323; Hostnig 2005). In Bolivia, the following sites should be recognized as National Heritage: El Buey, Cochabamba, a site with magnificent rock paintings linked to regional cultures with ceramics and textiles (Querejazu L.

1989), rock paintings of Tucavaca, Chiquitanía / Santa Cruz, rock paintings of Vallegrande / Santa Cruz (different sites spanning from early times, including very rare negative hand prints up to Colonial and Republican rock art), rock art in the río San Juan de Oro region of departments Tarija, Potosí and Chuquisaca (Methfessel 1997), and Chirapaca / La Paz with outstanding examples of Colonial rock art (Taboada 1992).

As the first step towards a preservation of sites, it is absolutely necessary to carry out regional surveys and documentation programs. Unfortunately, the present database on rock art sites is insufficient, particularly in Ecuador and Paraguay.

Very few archaeological parks with rock art exist in the four countries and their development and management is still in the early stages. In Peru and Bolivia some archaeological parks were created in the past without any administration, inviting tourism to unprotected sites. Too frequently, this has resulted in vandalism and destruction. Some administration for the protection of rock art exists in the cases of the following Peruvian sites: Nazca geoglyphs, petroglyphs of Toro Muerto (Arequipa) and Miculla (Tacna) (for the latter, cf. Gordillo, in prep.)

While state agencies such as national heritage institutions often lack a coherent policy for the preservation of rock art sites, the role of private institutions and independent rock art specialists may be crucial to bring about long-term conservation projects and the administration of sites (Strecker & Taboada 1999). In Bolivia the private organization SIARB is collaborating with local municipalities in the preservation of rock art in archaeological parks (Strecker & Podestá 2006).

Raised wooden boardwalks provide efficient measures for visitor control at the sites and, at the same time, allow visitors a convenient view of the rock art (Bednarik 2001a: 98); they have been implemented at sites at Calacala (Oruro) and Samaipata (Santa Cruz) in Bolivia. Infrastructure at a recently inaugurated archaeological park Incamachay – Pumamachay in Chuquisaca / Bolivia includes a paved path in a rock shelter, information boxes, and a metal frame impeding access to a cave which is still accessible to visitors in a guided tour accompanied by the guardian or site steward who received some basic training.

Community involvement has recently increased in the archaeological parks of Calacala (where a new guardian was appointed who was chosen by the community) and Incamachay (where the municipality of Sucre and the community of Tumpeca have come to a basic agreement on the administration of the site which benefits the community).

Education campaigns should play an important role in the management of rock art sites and some models exist in work by SIARB in Bolivia (Strecker 2001b) and by the author in Peru (Strecker 2005). SIARB tries to inform the public on the importance of rock art and promote an appropriate visitors' etiquette (for example, in the web page [www.siarb-bolivia.org](http://www.siarb-bolivia.org)).

Professional conservation measures at rock art sites are still rare in Latin America. In Incamachay / Bolivia a conservation treatment (cleaning of graffiti) was carried out in 2004 (Loubser and Taboada, 2005) followed by the inauguration of the park in May 2005. Conservation and administration of rock art sites play an increasing role at rock art meetings and in academic publications (Strecker & Taboada, eds. 1995).

## ***Conclusions***

It is estimated that some 3000 rock art sites exist in Ecuador, Peru, Bolivia, and Paraguay. Rock art investigations in Peru and Bolivia are increasing, and some efforts are undertaken to preserve rock art within archaeological parks. The situation in Ecuador and Paraguay is very different; apparently, no systematic rock art surveys have been undertaken yet in these two countries with the exception of Loja province and a small area of Napo province in Ecuador.

Only a few archaeological parks exist, and professional conservation measures at rock art sites are still very rare. A major problem is the lack of financial resources for research, recording and preservation of the cultural heritage and the lack of well-trained local archaeologists. There is a great need for training courses in rock art recording, conservation strategies and site administration. International assistance should be given by UNESCO and other organizations.

*See illustrations Annexe IV: page 224*

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