

Petroglyphs in the northern part of the General Valley in Costa Rica (Central America): Their situation in different landscapes

Martin Künne, Ines Beilke-Voigt and Kay-Uwe Voigt

Translated by Emily Schalk

Free University in Berlin, Germany

Introduction

Since 1993, an interdisciplinary team of archaeologists, anthropologists and archaeometrists from Germany and Switzerland has been engaged in documenting petroglyphs in south-western Costa Rica in a collaborative project with the Museo Regional del Sur in San Isidro. The following study focuses on an area of rock engravings, located between the Volcán and Sonador rivers in the north-eastern part of the Valle del General, which were recorded during the project. The specific region under investigation and the theoretical approach will be introduced and the methods employed in documentation and results achieved will be described. Finally, various illusive structures in the organisation of the landscape are viewed, in an attempt to shed an interpretative light on the analysed engravings.

Petroglyphs in Costa Rica

There are few studies on petroglyphs in Costa Rica and those at hand are usually of a descriptive character and arose as by-product of archaeological excavations and settlement analyses (cp. Snarskis et al. 1975; Acuña 1985a, b, c; Quilter; Blanco 1992). To date, no systematic documentation has been made of rock engravings in the country on the whole, and the cultural, chronological and ethnical context of the majority of carvings remains unknown. The few areas of rock engravings in Costa Rica, which have been well accounted for, are those in Pedregal near the volcano Oros' (Hardy; Vázquez 1993) and in the valley of the Río Reventanzón. The region of the upper Río Reventanzón in particular was investigated thoroughly with extensive excavations and precise recordings of the archaeological context (Kennedy 1968, 1970, 1971, 1973; Fonseca; Acuña 1986).

In contrast, petroglyphs in south-western Costa Rica have received less attention. Only one published study exists on the petroglyphs of the Diquís (Zilberg 1986) and the last documentation of rock carvings in the neighbouring province of Chiriquí (Panama) appeared some 40 years ago (Harte 1960; 1961). The present indigenous population of the Valle del General does not follow any kind of tradition in rock engravings and their myths and legends reveal very little about the origin, creator and significance of the petroglyphs. There is also no reference to these aspects in the records of the Spanish conquistadors during the Colonial period.

The Concept of Landscape

A description of the petroglyphs in the northern part of the Valle del General is attempted with the reconstruction of landscapes from prehistoric times in mind. Initially, an objective sketch of a landscape is presented, which categorizes all features of a territory (Bradley 1991). By defining their specific cultural organisation and perception, a landscape becomes a constructed, subjective entity full of meaning (Bradley et al. 1994). The environment, cultural and ethnic region and the perception of landscape are in 'layers', one above the other; temporal and geographical boundaries overlap, lending the construction an open framework. Hence the area of petroglyphs selected for this study presents multiple, subjectively-defined perspectives, rather than one single aspect. The manifold ways of reading petroglyphs within a landscape thus enable new overlappings of different meanings (Tilley 1991; 1994). By following an iconographic, archaeological and ethnographic focus of inquiry, the areas under study can be examined in their prehistoric context, thereby rendering a diachronic and many-sided view of the petroglyphs within the setting of their environment. Although seemingly indeterminate, the obscurity of the depictions should enhance their multi-faceted nature, rather than be regarded as a deficit.

The Natural Landscape

The Valle del General lies in south-western Costa Rica and encompasses an area of around 3700 square kilometres. It extends parallel to the Pacific coast as a longitudinal intermontane valley between the Cordillera de Talamanca and the coastal Cordilleras, reaching a length of approximately 125km and a breadth of up to 30km. The northern part of the valley is nourished by the river system of the Río del General, while the southern part lies within the drainage area of the Río Coto Brus. The river systems join in the middle of the valley's length to form the Río Diquís, which breaks through the Pacific Cordilleras. The many tributaries (quebradas) of both major rivers have formed wide and deep valleys, distinguished by their orientation towards the Cordillera de Talamanca. River deposition of eroded materials has led to fertile alluvial soils along the rivers and the formation of river terraces (entisols), favourable for cultivation. The north-eastern area of the Valle del General, above the height of 800m is characterised by steep slopes (some with a gradient of more than 50%) and high plateaus. However, the greater

part of the area lies between 100m and 600m and displays a gently undulating surface. Sedimentary rocks include granite, gabbro, diorite, andesite and basalt (Schruben 1996).

Well into the 19th century, the extent of the valley lying below 600m was an expansive savanna, which represented the only open countryside in the entire region. Today, the valley is marked by broad pastures and extensive cultivation of pineapple, coffee and sugar cane. The entire region up to 1000m has been completely cleared by the slash-and-burn technique and divided into tracts of land. The few open grass plains still in existence are those preserved in reservations (*reservas indígenas*). Destruction of the original flora and fauna has taken away the natural means of subsistence, upon which the traditions of the indigenous population were based.

The Area of Propection

The area under investigation (P-144-FS) lies in the north-eastern part of the Valle del General about 30 km south of San Isidro. Extending from 600m up to heights of 1000m, i.e. in some areas transcending into the Cordillera de Talamanca, the total area covers some 800ha, about 400ha of which is primeval rain forest. The lower part of the area under study is bordered by the Río Convento and Río Sonador, while the upper reaches extend from Río Sonador to Quebrada Cacao near Río Volcán. The petroglyphs which were recorded are located in an open landscape below the line of 800m. Areas of dense rain forest within the area of propection could not be penetrated for investigation.

With an orientation towards natural features, our research team divided the open territories into four areas of propection, each two hectares in size. Area A contained the highest concentration of rocks, situated in two parallel depressions in the direct vicinity of the Río Convento. The rocks varied in size, up to that of a house. Today, the area serves as pasture land. Area B designates a site located on a slope. The rocks investigated lie in corn fields, which are separated by streams, and are no larger than 2m x 1.7m. Area C is located at the edge of a field cleared by slash-and-burn and has a dense cover of bushes. The rocks found here were the largest in our study, some reaching a length of 10m, a width of 5.5m and a maximum height of 3.8m. Two rocks have a smooth surface and the form of a giant whales back. Areas A, B and C are located at a height of about 800m, while area D lies somewhat lower at 650m. The latter is a level area in the proximity of Río Convento.

The Petroglyphs

The petroglyphs were found on rocks of diorite, andesite and basalt. No preference could be observed in the rocks' orientation, nor in that of the motifs. The east-west orientation observed in other areas of petroglyphs in Costa Rica could not be affirmed here (cp. Bonilla 1974). The depictions were pecked or struck into the rock and the

edges of the dotted lines smoothed. Two engravings were discovered in area C, which were obviously unfinished. The motifs consisted of rows of dots, creating grooves 2cm deep at the most and no more than 1.5cm in wide.

Abstract, stylised forms are depicted; naturalistic figures are absent. Moreover, no natural objects can be recognised in the abstract forms. Stylised forms diverge from naturalistic representations, yet these can be recognised through the canonic manner of depiction. Abstract figures predominate in the propection area, comprising spirals, circles, concentric circles, lines and rounded meanders. Stylised engravings, on the other hand, depict faces and anthropomorphic forms. In addition, cup-like hollows were also found among the representations.

The petroglyphs were found on two kinds of rocks. The majority of depictions were carved into the level upper surface of a rock, ranging from very flat rocks to isolated, tree-high boulders. In some cases, the crest formed at the join of two sides of a rock was engraved. Yet the lateral surfaces of these rocks were never engraved, nor did all rocks with a level upper surface carry petroglyphs. A second kind of rock displays petroglyphs on the side surfaces as well. These rocks are very large and in the form of a knob or cone with a smooth surface. As mentioned above, they were found only in area C.

The majority of engravings form large, abstract compositions, which cover the entire surface of the individual rock. Single motifs are connected by straight or winding lines. Abstract motifs sometimes appear as the sole depiction, specifically on the edge of the particular rock's upper surface. Cup-shaped hollows are often together with straight lines, either separately or as part of a larger depiction. Complex representations are sometimes bordered by deeper hollows. In general, there seems to have been a preference for rounded forms; pointed lines and right angles are rare. Apparently, a frontal orientation of the engravings was intended; their view in another direction is not clearly discernible. An overlapping of motifs was not observed (cp. table 1).

To date, 45 rocks with differing techniques of engraving have been documented: 29 rocks in area A, 11 in B, three in C and two in D. Further rocks with petroglyphs were found in areas B, C and D. The recorded motifs on 24 rocks have been evaluated in area A. Sixteen display abstract motifs, which form large compositions. Three show isolated abstract motifs (spirals, arcs and concentric circles). Four other rocks carry cup-shaped hollows, with lines running towards or away from them. A single, large and very conspicuous rock is engraved with an anthropomorphic figure, stylised in form and connected with spirals, circles and meandering lines. All representations are on the rocks' upper surface. The most frequent motifs are simple circles and spirals, whereby the latter appear either singly or as a double-spiral. Spirals are directed to the left or the right and can have up to five winds. Some are directed towards the centre of the



Fig. 15.1 Finca Sonador: Petroglyph rubbing



Plate 15.2 Finca Sonador: Petroglyph No. 001.



Plate 15.3. Finca Sonador: Petroglyph No. 023 (detail).

engraving and then outwards in reverse. Lines with countless branches and unclear course were not counted, with the exception of distinct meanders. Cup-like and deep hollows were noted separately. Independent of their correlation with other engravings, they seem to have a more functional significance, such as in preparing food, and grinding substances for pigments (cp. table 2). The percentages given for area A are approximations. Likewise, in the other areas of prospection motifs with spirals and circles seem to predominate.

Methods of Documentation

The position of the rocks in areas A and B were measured in a polygonal network, which, in turn, are connected by GPS to the global map system of Costa Rica. Using CAD-software a plan of the find spots was set up for area A. In addition we measured for this area point raster, which serve as the basis for a topographical model and plan with contour lines. Besides concentration of finds, the latter also marks possible affinities with the location itself. Each engraved rock was measured at two points, giving its exact position and orientation. Thus, two-dimensional engravings can be integrated in the plan at any time. Measurements were also made of the maximal length, width and height of each documented rock. Data was recorded by hand and digitally. The structure of the landscape in the area under prospection was illustrated as a three-dimensional model. Theoretically, it is possible to integrate 3-D drawings into the model and present them in animation or simulation. Combining the databank, photographs and drawings enables the prospective

enlargement of the collected data to a GIS.

Documentation of motifs and representations was carried out with photographs, drawings and folia. The aim was to achieve as precise a copy of the original engraving and its bearer as possible. The most exact recordings were made using a 3-D digitiser (trigomat). This consists of a computer connected with three measuring devices. The devices were set up in a triangle around the rock to be recorded, each with a measuring tape of 15m. The tapes meet at the indicator, with which the engravings are followed. Thereby, the indicator can come into contact with the rock without damaging the surface. The software is able to determine the 3-D co-ordinates of the measured point, according to the length of measuring tapes, with precision (max. 0.1% error). A three-dimensional drawing is presented on-line in the monitor, allowing the first plausibility check on the data. The resulting data is saved in an ASCII file. It has been our experience that this system of recording has saved up to 80% of the time normally needed by ordinary methods of drawing. Moreover, using this method a petroglyph can be recorded in its entirety. The rock can be seen from each side by computer animation.

Archaeological Landscape

The Valle del General belongs to the archaeological region of Gran Chiriquí, which encompasses the province Chiriquí in Panama and the subregion Diquís in Costa Rica. The latter region extends from the Panama border in the south to the Cordillera de Candelaria. The area is

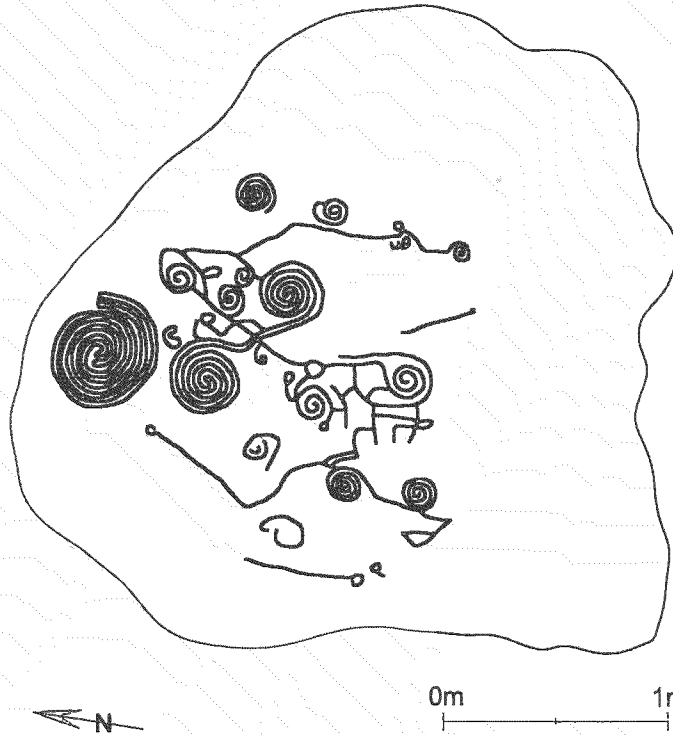


Fig. 15.4 Finca Sonador: two-dimensional image.



Fig. 15.5 Finca Sonador: three-dimensional image.

bordered by the Talamanca mountains in the north-east and the Pacific coast to the south-west (cp. Snarskis 1981). Archaeological investigations in the Valle del General have concentrated on settlement analysis (cp Corrales Ulloa 1985, Drolet 1992). More than 250 sites have been localized to date, the majority of which are situated in the fertile alluvial valleys of larger rivers. Chronologically, the

settlements are assigned to the Formative Period (1000 BD-700 AD), the Precontact Period (700-1520 AD) and the Contact Period (1520 AD and on). The preceding aceramic phase (5000 BD-1000 BD) was datable with certainty only at sites in western Panama (Drolet 1988). However, find spots from this phase can be presumed in the caves and abris of the quebradas (Abrigo La Muerte),

on the upper Río Convento (Abrigo Convento) and near Doboncragua (Abrigo Veragua). A rock with large, abstract engravings was found near Abrigo Convento, in the proximity of our area of prospection. Palaeo-Indian sites are unknown in the Diquís, however, Clovis stone projectile points were found near Turrialba on the eastern slopes of the Talamanca mountains and by Lake Madden near the Panama Canal, which date back to 10,000-12,000 BC (Fonseca 1992). At present there is no detailed survey of the correlation between settlement sites and rocks with petroglyphs in the Valle del General.

All presumed ceremonial centres lie in the south of the valley, at a distance of 35-85km from the area of prospection. Rocks of spherical shape and polished surface, the diameter of some reaching 2.15m, were discovered near Changuena and Las Bolas on the Río Cabagra. They appear as far west as the Uvita plateau on the Pacific Coast. Anthropomorphic statues of stone up to 1.30m height are reported from the Río Diquís delta region, from the source of the Río Coto Brus and from the vicinity of San Vito. Further, it is reported that a rock with petroglyphs, discovered at the source of the Río Coto Brus, was encircled by round stone seats (Stone 1968). Stone statues and cylindrical seats have also been found near Barriles, province of Chiriquí (Haberland 1981).

According to field surveys and reports of the local population, petroglyphs are distributed throughout the Valle del General. Fifty-two rocks with engravings, although outside the prospection area, were documented photographically in our project. They are found among 13 different groups of petroglyphs in the northern part of the valley. One rock with glyphs was noted on the upper Río Volcán (Lothrop 1926); other rock engravings are reported from the central and southern peripheries of the valley, from Río Terraba (Drolet 1983), Río Quebradas (Corrales Ulloa 1986) and the source of the Río Coto Brus (Stone 1968). In addition to abstract, geometrical and anthropomorphic motifs, zoomorphic figures (monkeys) were also reported by the local population. More petroglyphs have been recorded in Río Buenavista and Chirripó del Pacífico in the far north-east of the valley, as well as a boulder near Rivas, upon which the panorama of the Talamanca mountains is depicted (Quilter /Blanco 1992). Until now, 24 petroglyph sites have been accounted for in the Panamanian province Chiriquí (Harte 1960, 1961; Haberland 1961).

Nearly all petroglyphs recorded in the Valle del General are located in immediate pre-montane areas of the main valley and its side valleys. The majority lie at a distance from pre-Columbian centres of settlement. This distribution can be interpreted as an indication that petroglyphs appear at places of regional and social transition. On the other hand, they could also be associated with land division and clearance of fertile areas of the lower valley. According to the Terraba, rocks with petroglyphs were used for road and house construction.

In addition to rocks engravings, two burial grounds with barrows and one area with simple graves were discovered in open spaces within the area of prospection. Cemeteries and petroglyphs are known in the neighbouring territories as well. Cemeteries are usually located atop hills and as was observed by rocks with petroglyphs show no preference in orientation (Haberland 1984). Some graves in the Valle del General are designated by a vertical stone slab, whereby the edges of some slabs were engraved with anthropomorphic and zoomorphic motifs (for the highland region cp Lothrop 1926, fig. 179). Similar stones edged with petroglyphs are reported at the site of Azul in the region of Reventazón (Kennedy 1970, fig. 10 B).

Grave robbers have found unpainted animal and human figures around 10cm in size, tripod bowls and flute vessels (okarinas) painted reddish black, in addition to works in gold. The pottery has been described as characteristic for this region (Lothrop 1926). Red-brown coloured vessels are typical of the Aguas Buenas period, which can be dated between 300 BD to 700 AD (Haberland 1984, Snarskis 1983). Figures of animals represent water hogs (capybaras), tortoises, jaguars, monkeys and armadillos. Figures of snakes, fish and birds have also been reported (Stone/Kutscher 1991). Surface finds were recorded in two places in the area of prospection. They include fragments of clay pottery, which came to light after farmers had ploughed pasture land for the first time. Reddish brown and unpainted, the sherds are thin-walled and can bear incised lines. They belong to the so-called biscuit-ware of the phases after 700 A.D. The iconography of pottery, the works in gold and the petroglyphs reflect the same basic, interpretative elements (concentric circles, spirals and dots), yet there is no generative similarity in structure.

Ethnic Landscape

There is no reliable background information or documentation pertaining to pre-Columbian times in the Valle del General. Various authors surmise that there was a culturally uniform ancient population in Central America who spoke Aruak and that it was radically changed with the immigration of the Chibcha (e.g. Fonseca 1995, Krickeberg 1949). Changes in ceramic forms and styles, the appearance of works in gold, triangular arrowheads and shaft- and chamber graves point to a radical cultural change between 600-800 AD in south-eastern Costa Rica too (Haberland 1984).

The first written documents about the inhabitants of the Valle del General stem from the Spanish conquistador Juan Vázquez de Coronado in 1563. As in his later reports, he employed the names of localities, landscapes and the Caziquen as ethnonyms, without specifying which population was the actual ethnic group or how this identification was made. According to his descriptions, Coronado entered the Valle del General near the modern community of El Maíz and thereafter discovered the province of Turucaca in the central part of the valley. He later designated the same region Borucaca (Fernández

Guardia 1964). Coronado found the settlement Couto near present-day Potrero Grande (Ferrero 1962). In his accounts he listed 16 other communities in the savanna of Valle del General. Based on *obediencias* and *repartimientos* of the Colonial period, the Coto group has been assigned to the southern Valle del General and Río Coto Brus (Lehmann 1920). The Borucaca allegedly settled in the area north of Río Terraba up to Río Ceibo, where they inhabited the south-western slopes of the Talamanca mountains, the coastal Cordilleras and the Pacific coast up to Río Barú (Ibarra 1990). There is no information at hand about the ethnic groups north of Río Barú.

However, it is known that the Valle del General was connected with indigenous groups on the eastern slopes of the Talamanca and the central highlands through trade routes near Cabagra, Ujarràs and Rivas. Local populations from the Atlantic Tarire river systems (the Biceita, Urinamà, Ara, Cabeaca, Korhue, Ateo, Quepca and Ciruro) gradually mixed to form the Bribri and Cabécar of the Colonial period (Lehmann 1920). Since 1845, groups have settled areas between the Ceibo and Mosca rivers in central Valle del General (Guevara 1986). The Reduccion Boruca, founded in 1608, gradually absorbed the remaining Borucaca, Coto and Quepo during the following centuries (Guevara 1992). Today, descendants of these groups are the Brunqua, who inhabit the western regions of the central valley. As of 1699, members of the Terraba-Norteños from the Atlantic river system Río Tilorio were also settled in the vicinity (Lehmann 1920). Areas between the southern end of the Valle del General and the community San Vito are presently populated by around 2000 Ngöbe (Guaymí), who entered this region later in historical times (Guevara 1992).

Mythical Landscape

According to the mythology of the Cabécar, the organisation of the world is comparable with the conical halves of a rhombus. Each half is divided into four layers of landscapes or houses and in every level there are positive and negative energies that are personified as spirits or demons (Bozzoli 1985). At the zenith of each conical framework stands the sun, in some versions a bright star, which is inhabited by the male creator god, Sibö. His female counterpart, Surà, who embodies the moon, lives at the nadir. The Bribri and Cabécar live in the centre of both worlds and through their shamans (*awapa* or *sukia*) are able to obtain contact with all levels (Garcia 1996).

Mountains, boulders and rocks play an important role in the mythical landscape of all indigenous peoples in the Valle del General, for they are inhabited by invisible beings who - omnipresent - move with the wind throughout the upper and lower levels of the world. Every mountain has its own spirit, *tamí* (Garcia 1996). According to the myths of the Brunqua, a giant snake lives in the mountains east of the Río Diquís. The reptile is also associated with the mouth of the Diquís into the Pacific

(Stone 1961). Kuasran, the fabled forefather of the Brunqua, resides in the coastal Cordilleras (Stone 1961). Rocks near Barranco represent the petrified hearts of two witches, the *mamram* (Stone 1949). Myths relate that the ancestors of the Terraba and Brunqua came as apes and capybara to the Valle del General. They were transformed into humans at the spot where a jaguar struck its claws on a rock. The stone, known as *mano del tigre* (tiger's paw), is located near the modern community of Terraba and is covered with natural markings, which seem insignificant to the unknowing observer. There, the shamans (*awapa*) of the Cabécar presented offerings of food annually (Stone 1961).

The Bribri believe that rocks are the primeval material, from which the creator god Sibö made animals, plants and human beings (Stone/Melendez 1964). In mythical times, the rocks were as soft as clay and possessed other qualities. Sibö can enter rocks and depart from them (Stone 1961). When creating the world, Sibö hung the first of two suns from a rock on the upper Río Lari in the eastern Talamanca (Garcia 1996). Rocks which are actually large in reality are small in size in the mythical landscape of the Bribri, whereas in the transcendental spheres small stones can be transformed into large boulders (Garcia 1996). Areas of boulders and rocks that are bordered by the same streams are considered separate territories, both in reality and in the mythical landscape.

In addition to real and mythical worlds, the *awapa* have access to 'landscapes' within the body. Mythical functions are attributed to various organs. For instance, the facility of speech resides within the liver. It is called *yàbolo*, which also means 'sacred' and 'oracle stones' (Garcia 1996). Shamans of the Cabécar make use of the latter in healing and in predicting the life-span of their patients (Stone/Melendez 1961). Usually stones as big as the palm of the hand serve as oracle stones (*siã*), and similar stones are also found in graves (Stone 1949). There are male and female *siã*. The more powerful female stones are oval and flat; the male stones are spherical. Before his birth as a god, Sibö himself was a female oracle stone. In order to communicate with the stones, the *awapa* must sing, speak and blow on them. Their songs have been documented in the medieval Cabécar. The oracle stone's spirit provides information that comes from the time when the spirit once belonged to Sibö (Garcia 1996). The stones can be questioned only at dusk or at night, whereby the spirit answers with only yes or no (Stone 1961).

The Motifs and their Meaning

Rock engravings depict, represent and pursue a purpose. They are of iconographic, symbolic, as well as social significance (Dubelaar 1986a). In an interpretative approach to the engravings, the function of the motifs as evidenced in recent indigenous cultures, their location in the various landscapes and the significance of the kind of rock upon they are found are drawn into view. Well into the 1950s local inhabitants of the Valle del General carved

abstract motifs on the wooden posts of their traditional houses, which symbolised each group's mythological world view. For example, the Cabécar carved motifs on the posts near house entrances. Sibö was represented on posts to the east, Surà in the west, a snake in the north and Ayàbru in the south. The mythical worm Sítaba was depicted on other places. Forks of the supportive posts were reportedly painted with motifs as well, to ward off evil, illness and water (González 1989).

Today, shamans of the Cabécar paint wooden healing staffs (urú), which serve in invoking transcendental beings. These staffs embody the posts of traditional indigenous houses and the mythical world axis, upon which all upper and lower levels of landscapes are arranged in a row - like beads on a string. The urú range in length from 75cm to 150cm (Bozzoli 1982) and the motifs upon them are painted in red and black natural colours (Salazar 1980). Represented are anthropomorphic figures (the creator god Sibö), animals (monkeys, crocodiles, snakes, scorpions and birds), plant forms (palm trees and corn stalks) and abstract motifs, all symbolising the illnesses to be cured and their spirits (González 1989, Garcia 1996). Some motifs stand for the awàs' assistants, while others signify evil beings (Stone 1961). The Bribri reportedly draw spiral motifs on their urú, either with charcoal or by carving into the wood (pers. comm. Dobles). The signs depict the dwellings of the spirits and serve to ward off illness and misfortune. Thereby, male spirits have a quadratic shape and houses are represented by concentric circles. In one case, the urú shows a house of three concentric circles, connected to one another with rays (Salazar). According to custom, the urú is buried at a distant place, from where it then can draw away all evil energies (González 1989).

In the mythical narratives of the Cabécar and Bribri, circles correlate with the form of the earth and the ocean and concentric circles and spirals can signify the various levels of the world. In their descriptions of these levels, the Cabécar and Bribri made use of metaphorical speech. Thus, standing bodies of water symbolised both houses and/or transcendental powers from levels of the world. On the other hand, standing water was symbolic of human dwellings for supernatural beings (Guevara 1986). Simple spirals also appear on anthropomorphic and zoomorphic figures in gold (Tumbaga) and in clay, representing, in many cases, the female breast. Sometimes double spirals take the place of ears on gold figures, while encircled dots can appear as eyes on clay figures of animals and humans. In Central American literature, cup-shaped hollows are often associated with the cult of head-trophies practised by indigenous groups during the early Colonial period (e.g. Martillo 1965, 1968; Stone 1968).

Conclusion

Rock engravings can be described and interpreted according to their location in a landscape. Therefore, it is necessary to demonstrate how the landscape was, or could

have been, organized in prehistoric times. In order to do justice to the objective resources of a landscape, this implies 'paging through' its many reconstructable and significant levels, thereby rejecting a single model as an explanation. The information obtained can be correlated by drawing other aspects as analogies. Instead of verifying all assumptions, many false or erroneous judgments are brought to light. Thus, the method does not produce definite answers, but it does allow concrete inquiries.

Based on archaeological evidence of the presence of human beings in Costa Rica, it can be presumed that palaeo-, meso- and neo-indigenous groups and cultures were the authors of the rock engravings in Valle del General. However, securely dated archaeological remains derive only from the first millennium BC, at the earliest. Cultural correlations are also uncertain. Further, classification according to ethnic groups is hindered due to migrations of peoples during the eighth and sixteenth centuries AD. Nevertheless, the use of motifs documented in petroglyphs on other materials in prehistoric and recent times implies that traditions in rock engraving continued into the last centuries preceding the arrival of Spanish conquistadors.

Rocks engravings recorded in peripheral valleys indicate their position in a transitional zone from one landscape, culture or ethnic region to another. Their location near bodies of water within the prospection area and their mythical function as a delimitation or means of communication point toward their role as a boundary marker or a site for communing. Since engraved rocks in the area under study were usually found at a distance from cemeteries and settlements, they apparently had their own importance and a function outside the realm of daily life. The rocks' remote location in relation to presumed pre-Columbian ceremonial centres leads to the suggestion that - in space of any synchronisms - no direct connection existed between the two.

The position of motifs on the rocks' smooth surface implies a frontal view and does not indicate a specific direction from which they were intended to be seen. This, in turn, implies a number of specific criteria and special effort for the authors of the engravings. Two distinct kinds of rocks with engravings seem to indicate various attributes. In comparison with oracle stones used today, the interpretation of an oval and level form as female and a rounded or knobbed form as male is suggested. Aside from these, rocks with natural markings, that are seemingly meaningless to the ignorant viewer, are also of significance.

Spirals and circles carved or drawn on medicine staffs suggest that the process of depicting something on rocks also served as communication. Here, the aesthetic achievements on urú play only a minor role. Of principal importance is their use in communication with transcendental beings. This function of motifs is correlated with the absence of overlapping motifs, i.e. the isolated

position of motifs on the rock's surface. Likewise, indigenous interpretations from recent times of individual motifs on urú staffs, house posts and in petroglyphs seem to affirm that rock engravings served to mark specific areas as a place for communication. Thereby, several sometimes contradictory meanings can be attributed to one sign (for instance, the spiral as spirit's house, body of water, boundary, path). The proportionate size of 1:1 makes the reconstruction of a grammatical structure difficult. It is possible that large abstract compositions represent mythical landscapes or maps.

In the mythological narratives of indigenous groups in the Valle del General, rocks are regarded as primeval material, as living or inhabited, as transformed and with speech. Today, one still speaks with oracle stones and sacred stones. For the shamans of the Cabécar and Bribri, oracle stones lead to memory and truth. The connection to the past by means of the stones enables an explanation of the present. Therefore, engravings made on an 'eternal' material might show ways and persons for communication.

The hypotheses presented here constitute the theme of a scientific study, which is being pursued at the Free University in Berlin (Germany).

Table 1

Forms of representation

I. Abstract-geometric representations

- i. spirals
- ii. circles
- iii. concentric circles
- iv. circles with interior designs (point, line)
- v. semicircles
- vi. arcs
- vii. lines
- viii. straight lines
- ix. waved lines
- x. pointed lines
- vi. rounded meanders
- xii. crosses

II. stylized representations

- i. faces
- ii. with circled outline
- iii. with rectangle outline
- iv. without outline
- v. anthropomorphs
- vi. zoomorphs

III other forms

- i. cupules
- ii. hollows

Table 2

Motifs on 24 stones of section A (numbers also as %)		
spirales	82	(34,6%)
circles	68	(28,7%)
concentric circles	46	(19,5%)
circles with interior designs	15	(6,3%)
semicircles	6	(2,5%)
arcs	9	(3,8%)
rounded meanders	8	(3,4%)
faces	2	(0,8%)
anthropomorphs	1	(0,4%)
Total	237	(100,0%)

Miscellaneous Designs

cupules	24
hollows	8
Total	32

REFERENCES

Bozzoli de Wille, María Eugenia (1977 a) Narraciones Bribris, in: *Vinculos*, vol. 2 (2):165-200. San José.

Bozzoli de Wille, María Eugenia (1982) Narraciones talamanquenas, in: *Vinculos*, Vol. 8 (1/2):1-12. San José.

Bozzoli de Wille, María Eugenia et. al. (1985) Los caminos de Pablo Presbere en 1983, in: *Instituto Geográfico Nacional. Relación de Actividades*, p. 50-80. San José.

Bradley, Richard (1991) Rock Art and the perception of Landscape. In: *Cambridge Archaeological Journal* 1(1): 77-101. Cambridge.

Bradley, Richard; Felipe Criado Boado, Ramón Fabregas Valcarce (1994) Rock art research as landscape archaeology: a pilot study in Galicia, north-west Spain, in: *World Archaeology* Vol. 25 (3): 374-390. London.

Drolet, Robert P. (1988) The emergence and intensification of complex societies in Pacific southern Costa Rica. In: *Archeology and Art in Costa Rican Prehistory*. Lange, Frederick W. (ed.). p. 163-188. Colorado.

Dubelaar, Cornelis Nikolaas (1986 a) *South American and Carribean Petroglyphs*. Dordrecht.

Fernández Guardia, Ricardo D. (1964) *Cartas de Juan Vázquez de Coronado*. San José.

Ferrero A., Luis (1962) Ensayo geográfico Histórico de la primera Expedición de Juan Vázquez de Coronado al Sur del Pa's, in: *Ministerio de obras Públicas; Instituto Geográfico de Costa Rica* (eds.), Informe Semestral, julio a diciembre 1961. San José.

- Ferrero A., Luis (1981 a) Ethnohistory and Ethnography in the Central Highlands-Atlantic Watershed and Diquís, in: Benson, Elizabeth P. (ed.). *Between Continents/Between Seas: Precolumbian Art of Costa Rica*. pp. 93-103. New York.
- Fonseca Zamora, Oscar (1992) *Historia antigua de Costa Rica: Surgimiento y caracterización de la primera civilización costarricense*. San José.
- Fonseca Zamora, Oscar (1995) *Concepto de Área Histórica Chibchoide*. San José.
- Fonseca Zamora, Oscar, Víctor Acuña C. (1986) Los petroglifos de Guayabo de Turrialba y su contexto, in: Lange; Frederick; L. Norr (eds.), *Journal of the Steward Anthropological Society*, Vol. 14 (1-2):236-254.
- García, Ali; Jaén, Alejandro (1996) *Es sa' yilite. Historias Bribris*. San José.
- González Chaves, Alfredo; González Vasquez, Fernando (1989) *La casa cósmica talamancaña y sus simbolismos*. San José.
- Guevara Berger, Marcos (1986) *Mitologie des Indiens Talamanca (Costa Rica)*. Paris.
- Haberland, Wolfgang (1961) Archäologische Untersuchungen in der Provinz Chiriquí, Panama. *Acta Humboldtiana. Serie Geografica et Etnografica*, Nr. 3. Wiesbaden.
- Haberland, Wolfgang (1984) The Archeology of Greater Chiriquí, in: Lange, Frederick; Stone, Doris (eds.), *The Archeology of Lower Central America*, p. 233-253. Albuquerque.
- Hammett, Florence (1967) A study of Costa Rican petroglyphs. *Unpublished Manuscript*. Museo Nacional de Costa Rica. San José.
- Hardy, Ellen T., Ricardo Vázquez (1993) *Proyecto Arqueológico Volcán Orosí. Results of Preliminary Investigation of Sitio Pedregal. Área de Conservación Guanacaste*. San José.
- Harte, Neville A. (1960) *Preliminary Report on petroglyphs of the Republic of Panama. 1951-1960*. Panamá.
- Harte, Neville A. (1961) *Panorama of Panama Petroglyphs*. Panamá.
- Hodder, Ian (1986) *Reading the Past*. Cambridge.
- Ibarra Rojas, Eugénia (1990) *Las sociedades cacicales de Costa Rica en el siglo XVI*. Universidad de Costa Rica. San José.
- Kennedy, Williams Jerald (1968) *Archeological Investigations in the Reventazón River Drainage Area, Costa Rica*. University of Michigan.
- Harte, Neville A. (1970) Petroglifos de la Cuenca de Drenaje del Reventazón River Drainage Area, Costa Rica, in: *Informe Semestral de Instituto Geográfico Nacional de Costa Rica (IGN)*, Julio-Diciembre, pp. 49-99. San José.
- Harte, Neville A. (1971) Comparación de algunos diseños de petroglifos costarricenses con las áreas adyacentes. In: *Revista Dominicana de Arqueología y Antropología. Año II*, Vol. II, no. 2,3. Santo Domingo.
- Harte, Neville A. (1973) A Comparison of Certain Costa Rican Petroglyph Designs with those from Adjacent Areas, in: *Proceedings of the Fourth International Congress for the Study of Pre Columbian Cultures of the Lesser Antilles*, S. 47-56. Gainesville. Florida.
- Koerner, Reka (1993) Petroglyphs of the Finca Sonador: Analysis of distribution, iconographic, ethnographical, physical and natural resource factors. *Unpublished Manuscript* (ACM-Office, San José).
- Krickeberg, Walter (1949) *Felsplastik und Felsbilder bei den Kulturvölkern Altamerikas mit besonderer Berücksichtigung Mexikos*. Berlin.
- Lehmann, Walter (1920) *Die Sprachen Zentralamerikas*. Bd. 1/2. Berlin.
- Matillo Vila, Joaquín (1965) *Estas piedras hablan*. Managua.
- Matillo Vila, Joaquín (1968) *El Muerto, Isla Santuario. Estudio de su arte rupestre*. Managua.
- Museo Nacional de Costa Rica (ed.) (1995) *Oro, Jade, Bosques. Catálogo*. San José.
- Nuhn, H. (1978) *Atlas preliminar de Costa Rica*. San José.
- Osgood, John, & Nakao, Paul (1972) Petroglyphs of Costa Ricas Genreal valley. *Unpublished Manuscript* (ACM-Office, San José).
- Quilter, Jeffery; Blanco, Aida (1992) *Report on the 1992 Archaeological Investigation of the Rivas Site, Costa Rica*. San José.
- Salazar, Rodrigo (1980) *Los Cabécares Cronica de Viaje*. San José.
- Sandner, Gerhard (1961) *Aspectos Geográficos de la Colonización Agrícola en el Valle del General*. San José. (Karten)

Schruben, Paul G. (1996) *Geology and Resource Assessment of Costa Rica. U.S. Geological Survey Digital Data Series*. Reston, VA.

Snarskis, Michael J. (1981 b) The Archeology of Costa Rica. In: Benson, Elizabeth P. (ed.). *Between Continents/Between Seas: Precolumbian Art of Costa Rica*. pp. 15-84. New York.

Snarskis, Michael J. (1983) *La ceràmica precolombina en Costa Rica*. San José.

Snarskis, M., Crump, M., Murillo, C. (1975) Análisis de un petroglifo del Valle de Turrialba, Costa Rica. In: *Vínculos 1*: 83-90. San José.

Stone, Doris (1949) The Boruca of Costa Rica. *Papers of the Peabody Museum of American archeology and Ethnology*. Vol. 26, No. 2. Cambridge (Mass.).

Stone, Doris (1961) *Las tribus talamanqueñas de Costa Rica*. San José

Stone, Doris (1964) Aspecto físico-histórico de los pueblos talamanquenos de Costa Rica, in: XXXV Congreso Internacional de Americanistas. *Actas y Memorias*. Vol. 3. p. 219-222. México.

Stone, Doris (1968) *Einführung in die Archäologie Costa Ricar*. Stuttgart, München.

Tilley, Christopher (1991) *Material Culture and Text*. London, New York.

Tilley, Christopher (1994) *A Phenomenology Landscape. Places, Paths and Monuments*. Oxford, Providence.

Zilberg, Jonathan (1986) The Diquis Petroglyphs: Distribution, Archeological Context and Iconographic Content, in: Prehistoric Settlement Patterns in Costa Rica. *Journal of the Steward Anthropological Society*. Vol. 14 (1-2), 1982-1983, pp. 339-359. Illinois.

Ines Beilke-Voigt,
Kay Uwe Voigt
Greifswalder Str. 8,
10249 Berlin,
Germany
email: kuvoigt@julio.de

Ines Beilke-Voigt
Humboldt Universität Berlin
Institut für Ur- und Frühgeschichte
Hausvogteiplatz 5-7
10117 Berlin,
Germany
email: kuvoigt@julio.de

Martin Künne, M.A.
Freie Universität Berlin
Lateinamerika- Institut
Rüdesheimer Str. 54-56
14195 Berlin,
Germany
nitramek@yahoo.de