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CONSERVATION REALITIES AND CHALLENGES AT ARCHAEOLOGICAL AND HISTORICAL SITES IN COLOMBIA: SEEKING SUCCESS BY CONSIDERING THE CONTEXT

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ABSTRACT

This article introduces the idea that political and social realities have an important impact on conservation practice and sustainability for cultural heritage. This concept is illustrated through three case studies from my work at archaeological and historical sites in Colombia. The first case study is the *Fuente de Lavapatas*, an important pre-Columbian site in the archaeological park of San Agustín, a UNESCO World Heritage site. Despite great public interest in the site and careful research to inform a long-term management plan, a political decision was made and no further resources were allocated for its preservation. The second case study discusses how community involvement can positively transform a site and contribute to its conservation. It presents educational, research, and conservation efforts in the archaeological park of Facatativá, a nature reserve that includes rock shelters with pre-Columbian pictographs. The third case study relates to monuments in public spaces in Bogotá. While social conditions are negatively impacting monument conservation, recent political decisions have been made that have led to better conservation and outreach community practices. Considering these projects and events, it is clear that the preservation of cultural heritage is not only driven by deterioration factors such as the environment and human and biological activity, but also subject to deterioration factors resulting from the social context. Preservation is also highly vulnerable to political decisions. Understanding the impacts of decisions made in those contexts and the ability to anticipate the outcomes of these decisions can lead to better heritage management and the implementation of more sustainable conservation projects.

1. INTRODUCTION

The topic of sustainability was highlighted in my experience several years ago when I moved from conservation to planning and management concerns, opening my mind to aspects of decision making other than strictly technical ones. To illustrate this, I have chosen three examples, two of them taken from my experience with Colombian archaeological parks, and the third one related to historical monuments in a big city, taking Bogotá as an example. Each case demonstrates, in very different ways, the impacts of political and social contexts on sustainability and practice in cultural heritage preservation.

First, I will show how complex political realities affect decision making for the development and implementation of conservation projects, and how those realities may lead to heritage sites becoming self-regulated. An example of this is the *Fuente de Lavapatas*, in the archaeological park of San Agustín, a UNESCO World Heritage Site.

Then, I will show how constraints imposed by the political and social context open different possibilities for conservation practice. An example of this is the mandatory cleaning of pictographs in the Archaeological Park of Facatativá, prompted by a request from the community that opened the possibility to integrate conservation, archaeology, and educational issues.

The third case shows how ongoing, public, political protests in Bogotá forced the implementation of different strategies that included education, participation, and conservation. The selection and application of an anti-graffiti coating was carried out recently as a result of these efforts.

2. CASE STUDY 1: FUENTE DE LAVAPATAS

2.1 BACKGROUND

The *Fuente de Lavapatas* is located in the Archaeological Park of San Agustín, in the department of Huila in southern Colombia (fig. 1). It is considered a Property of Cultural Interest and protected by the UNESCO World Heritage designation.

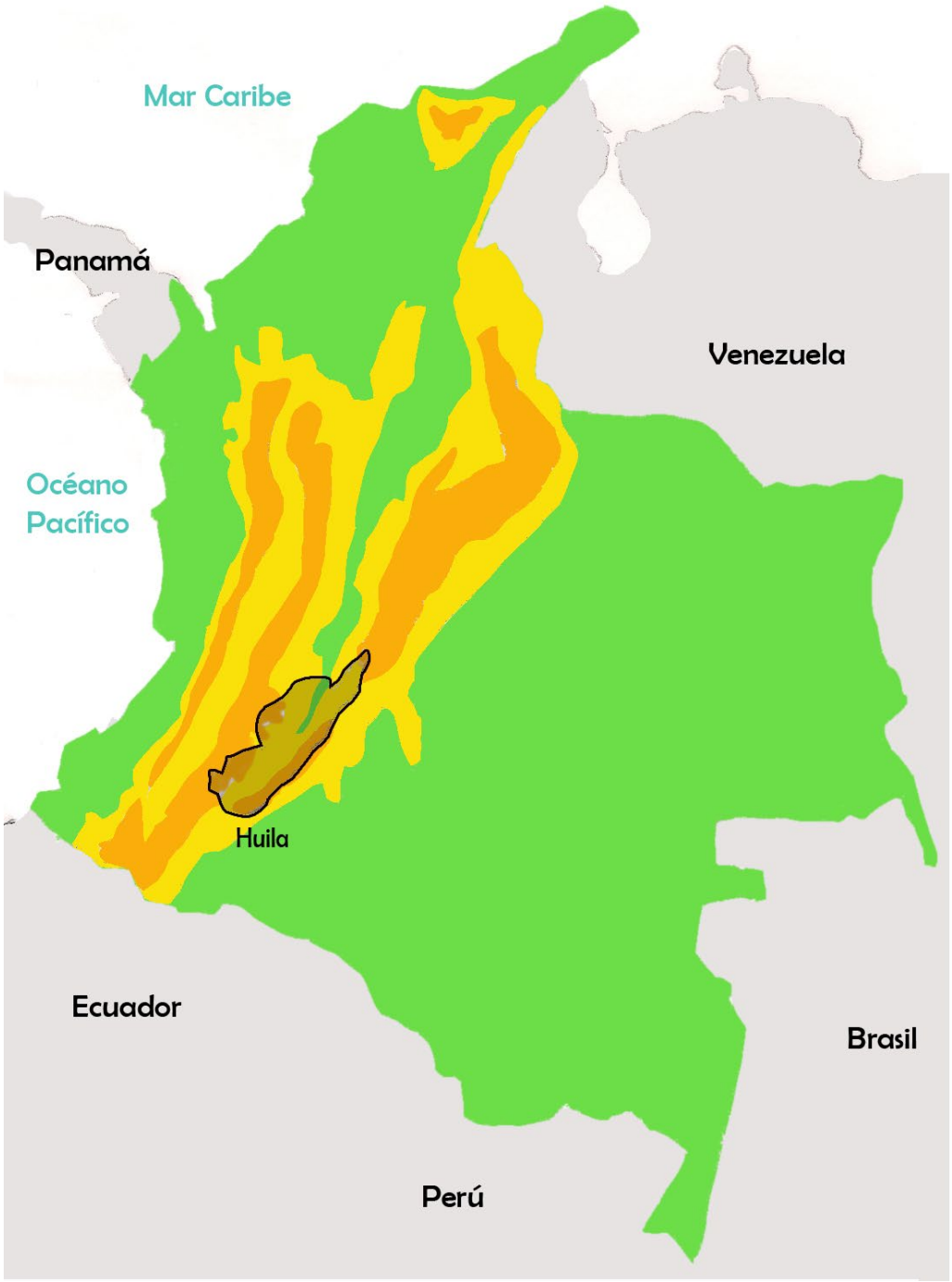

Fig. 1. Map of Colombia with the department of Huila indicated in gray. The Archaeological Park of San Agustín is located in the south of Huila. (Courtesy of M. P. Álvarez)

Fig. 2. *Fuente de Lavapatas* drawing by Luis Alfonso Sánchez from the archaeological commission headed by José Pérez de Barradas (7/10/1937) (Courtesy of ICANH)

The *Lavapatas* fountain was built by pre-Columbian sculptors of the Upper Magdalena region, sometime between the ninth century BC and the ninth century AD, in the sloping bed of the Lavapatas creek. The fountain is formed by a series of complex channels and wells that determine the direction of the water flow. As seen in figures 2 and 3, these channels define, mark, and highlight human and animal sculptures such as lizards and snakes.

The predominant forms are located in the north and central sections and are protected by a shelter covering an area of 20.2 × 21.7 m. Other carved forms and channels, which are less significant, are located outside of this covered area.

Since its discovery in 1937, the fountain has been unceasingly admired. It is a favorite place for visitors. Since 1937, both researchers and stakeholders have been attentive to the preservation of the site, expressing their concern over the loss of the carved shapes. In response to this concern, studies and analysis have documented the state of conservation of the fountain at different times. The studies made between the seventies and nineties were not carried out regularly or systematically and therefore do not allow a proper assessment of the level of the loss of the sculptural forms, the degree of deterioration of the stone, the effect of water, the environmental conditions, nor how much the presence of the shelter affects the fountain (Álvarez et al. 2012).

As seen in figure 4, the first shelter over the *Lavapatas* was directly attached to the site causing some damage to the stone. The current shelter (fig. 5), a metallic structure covered with acrylic, was installed in the eighties.

Fig. 3. View of the *Fuente de Lavapatas,* Archaeological Park of San Agustín, Colombia (Courtesy of C. Bateman)

Fig. 4. First shelter with structure directly attached to the *Lavapatas* (Courtesy of Duque, ICANH Archive 95ii 0191)

Fig. 5. Shelter installed in 1984 and present at the site currently (Courtesy of C. Bateman)

2.2 PRESERVATION OUTCOME

In order to respond to the conservation concerns that had not been resolved, a team of four conservators (including myself), one geologist, one microbiologist, and one graphic designer met between 2008 and 2012 to develop the Integral Conservation Project of the *Fuente de Lavapatas*. This group of professionals was hired by the Colombian Institute of Anthropology and History (ICANH) to carry out the project.[1]

The study provided a new understanding of the deterioration processes impacting the *Lavapatas* fountain (Alvarez et al. 2012, 92). It not only identified and documented the current conditions, but also considered the fountain's treatment history, local weather conditions, and geological and physical properties of the stone. This information completed what was missing from previous studies and allowed us to have a more comprehensive picture of what was happening on this site.

The review of historical treatments was done in order to understand changes that the site has experienced since its discovery in 1937. Different protective systems and water flow and canalization systems were studied, as well as previous documentation and conservation studies carried out from 1971 to 2007.

During a period of more than 6 months, local weather conditions were studied, measuring relative humidity and temperature inside and outside the shelter, and taking surface temperature measurements of the rock (fig. 6).

Fig. 6. Surface temperature measurements as part of the weather conditions study (Courtesy of A. Miro)

Those measurements allowed us to understand that the current shelter mitigates the impact of environmental conditions such as solar radiation, relative humidity, and temperature on the rock of the *Fuente*. However, the current shelter is inadequate because it leaks and has structural damage. The shelter conditions should be monitored and in the future it should be repaired.

The geological study was done in situ through the macro-description of the rock, the evaluation of capillary absorption, the documentation of fractures, and hardness of the surface, and in the laboratory through the study of samples taken from different areas of the fountain illustrating different states of conservation. Petrographic, microprobe SEM, infrared spectroscopy, and x-ray diffraction analyses were carried out allowing the understanding of the discontinuous and heterogeneous nature of the *Lavapatas* volcanic tuff, illustrated in figure 7.[2]

Fig. 7. Discontinuous and heterogeneous nature of the *Lavapatas* volcanic tuff (Courtesy of H. Jacobsen)

Samples from the areas surrounding the fountain were analyzed in two German stone conservation laboratories. After the mineralogical characterization of samples was carried out, the following physical properties were determined: water absorption, ultrasound speed, hydric expansion, porosity, thermal expansion, tension bending strength, and Young's modulus of elasticity. Snethlage and Wendler (1995) and Sasse and Snethlage (1996) methodologies were used.

A detailed observation of the site allowed us to establish the most significant damage to the stone: cracks, damage caused by the previous shelter, detachments, and disintegration.

The biodeterioration studies identified lichens, mosses, selaginellas and hepatics, microalgae, total aerobic bacteria, filamentous fungi, sulfur-reducing bacteria, nitrifying and total coliforms, and fecal organisms. For biodeterioration control, the evaluation and selection of several biocides was carried out. Biocides characterized by rapid degradation of the biocide, minimal toxicity, minimal bioaccumulation, and effectiveness at low concentrations were given preference. 1R3-Rocima 363 and Preventol CD-601, which are based on isothiazolinones and orthophenylphenol, were selected for use on the stone of the fountain (Villalba in Alvarez et al. 2012).

Consolidants to be used in disintegrated areas were also evaluated. The methodology proposed by Snethlage, Wendler, and Sasse (Snethlage and Wendler 1995; Sasse and Snethlage 1996) was followed. Five sequences in which ethyl silicates were used in different manners were evaluated. Two different ethyl silicates (Remmers KSE 300 and elastified Remmers KSE 300 E) were tested. Furthermore, the effect of two products, one that should minimize hygric dilatation (Remmers Antihygro) and a product that ought to improve adhesion to the surface (tartaric acid 0.14% diluted in alcohol), was examined (Jacobsen in Álvarez et al. 2012).

Additionally, the Integral Conservation Project of the *Fuente de Lavapatas* suggested further research in the following areas:

- Identification of a consolidant grout to repair detached stone fragments
- Treatment and management of the water flow in the *Lavapatas*
- 3D scanning
- Implementation of a monitoring program for environmental conditions and deterioration of the rock

2.3 THE INFLUENCE OF THE POLITICAL CONTEXT IN CONSERVATION

The studies carried out between 2008 and 2012 demonstrated the need to apply biocides and consolidants. Because the ICANH did not have qualified professionals to evaluate processes and ensure they meet international standards and contribute to the future conservation of this important site, outside expertise was requested. In March 2012, Dr. Gottfried Hauff, dean of the Stone Conservation Program of the Fachhochschule Potsdam, and Dr. Eberhard Wendler, author of several publications on stone conservation and an international expert on volcanic tuff, were called to consult on the project. They determined that our study provided accurate information that allowed a good understanding of the site conditions. They completed their analysis with observations about the presence of water, noting that water has the greatest impact on the conservation of the site. They recommended testing the silicate-based consolidants and biocides on samples of the same type of stone before starting treatment, and initiating a monitoring program of the samples and the ongoing deterioration processes in the *Lavapatas* over a period of 2 years (Álvarez and Jacobsen 2012).

In 2013, the conservator of the park, concerned about the continuity of the project, worked on monitoring the environmental conditions and deterioration of the *Lavapatas* rock (Rincón 2013).Yet in the same year, the leadership of ICANH made a politically motivated decision to only continue with the 3D scanning portion of the project. Unfortunately, ICANH did not invest in the monitoring phase, nor

any of the other recommendations put forth by the international experts, and so with this decision the ICANH essentially brought an end to the Integral Conservation Project of the *Fuente de Lavapatas*.

Conservation studies carried out for the *Fuente de Lavapatas* in the past did not provide relevant information because they were carried out every 10 years without ensuring continuity. This caused significant loss of detailed information and many wasted efforts. Today, as in the past, conservation initiatives for the *Lavapatas* seem to be headed for the same dismal fate.

In 2014, this important site remains in the same condition as it has been for decades. It continues to be subject to deterioration by natural factors and damage caused by undocumented maintenance activities performed by park workers. There is not a complete monitoring program that can inform decision-making activities and ensure the conservation of the site.

The *Lavapatas* conservation project is an example of the lack of sustainability of conservation processes in Colombia. It shows how much political decisions affect the continuity and effectiveness of conservation projects.

To ensure the sustainability of conservation projects, they should be considered priorities for the institution. This must be translated into the allocation of economic resources in the future. If persons occupying management positions change, the institution must honor the commitment to support those projects.

After illustrating the negative impacts of political context in conservation, the following examples will show how much conservation can be positively influenced by the political and social context.

3. CASE STUDY 2: ARCHAEOLOGICAL PARK OF FACATATIVÁ

3.1 BACKGROUND

The Facatativá nature reserve, which was declared a national archaeological park in 1946, is a very beautiful and heavily visited place located 36 km from Bogotá. It is known for having more than 20 rock shelters as seen in figures 8 and 9, with approximately 60 pre-Hispanic pictographic panels and 5 painted portraits of prominent citizens done in 1915. The area was used as a recreational park for years, during which time the pictographs were not protected in any way. The pre-Columbian heritage values were never appreciated or presented to the visitors.

Fig. 8. Panoramic view of the park's central area with the rock shelter of Los Presidentes and rock shelter 18 (Courtesy of M. P. Álvarez)

Fig. 9. Pictographs from Facatativá Archaeological Park (Courtesy of M. P. Álvarez and L. Castillo)

The use as a recreational park allowed several practices that directly led to deterioration of the pictographs. A great number of the pictographic panels were covered with graffiti, inscriptions, and scratches, and, occasionally, bonfires were lit under the rocky shelters. Some examples of this deterioration can be seen in figure 10.

In 2003, the ICANH hired me and a team of conservators to treat one of the pictographic panels: panel 16 (Álvarez 2003). The project was to continue over the course of several years. In 2004, conservation treatment on panels 19 and 20 was carried out (Álvarez and Martínez 2004). In 2005, panels 20a and 20b were treated (Álvarez and Martínez 2005). Unfortunately, after each intervention was

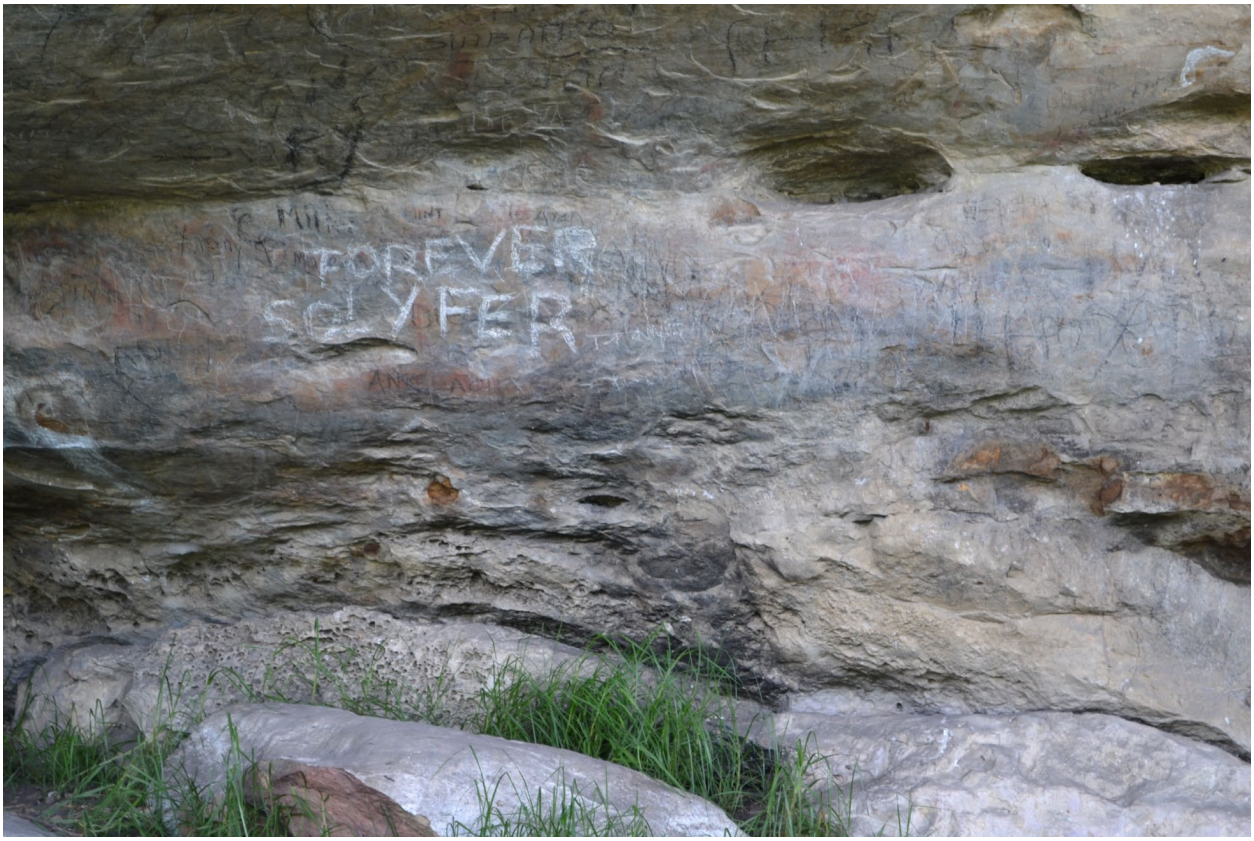

Fig. 10. Bonfire stains, salts, dirt, inscriptions, and graffiti on panel 20E in 2013 (Courtesy of L. Castillo)]

completed, we had to return to previously treated panels (16 and 19) because new dirt, graffiti, inscriptions, and scratches appeared.

Clearly, our efforts and the efforts of ICANH to conserve the pictographs were not sustainable. ICANH realized that a different strategy was required, so in 2005 they encouraged us to design an archeological management plan for the park. As the first management plan for an archeological park in Colombia, it included an integrated diagnosis of the site considering historic, legal, and administrative aspects; cultural values, documentation, the state of conservation of the pictographs, and aspects of education and interpretation.

The plan established the zoning and use regulations for the park. Recommendations included the protection of the panels with fencing, the construction of a path for visitors, the archaeological study of the site, and the development of education and interpretation activities. Additionally, the proposal underscored the need for documentation and treatment of the existing pictographic panels (Álvarez et al. 2005).

We began the fundraising process, which initially included funding for the conservation of 10 panels. Even after 2 years of advocacy in political and cultural institutions, however, it was not possible to find financial support for implementing the recommended activities.

In 2007, people from the community of Facatativá, who were concerned about the state of the pictographs, filed a legal action against the government and succeeded. As a result, the institution in charge of the management of the site since 1974, Corporación Autónoma Regional (CAR), had to complete necessary actions for the appropriate protection of this archaeological heritage. This was done with the approval of the institution in charge of the conservation of archaeological heritage, ICANH.

The work started with the installation of fences in 2009 and the approval of the methodology for the conservation of 41 pictographic panels. In 2013, administrative arrangements were approved, and the National University was contracted to implement archaeological contextualization, conservation of 41 pictographic panels, and community outreach in the Archaeological Park of Facatativá (Rodríguez et al. 2013). Currently I am coordinating the conservation component of the project, working with a team of eight conservators and seven assistants, five of them from Facatativá.

3.2 PRESERVATION OUTCOME

Conservation and documentation activities for 41 pictographic panels started on July 31, 2014, and was planned to finish in December 2014. The following activities were carried out for each pictographic panel:

- Photographic documentation
- Compilation of previous documentation
- Description and graphic documentation of pictographs
- Documentation and identification of damage. This is supported by laboratory analysis of salts, stains, and biodeterioration.
- Assessment of the condition of the pictographs
- Treatment proposal supported by cleaning tests approved by ICANH
- Conservation treatments
    - Cleaning: As seen in figure 11, steam, brushes, erasers, sponges, and solvents were used. In some special cases a motor-tool and microsand blasting was required.
    - Consolidation of pictograph's paint layers, and ground and paint layers from the 1915 painting (fig. 12).
    - Inscriptions, graffiti, and scratches that could not be eliminated during the cleaning process had to be covered with silicate chalks. For the 1915 paintings, the retouching technique of *acquasporca* was used.

Fig. 11. Conservation activities carried out on different pictographic panels during 2014 (Courtesy of G. McCormick and M. P. Álvarez)

- Before and after photographs and graphic documentation of pictographs were used to evaluate the effectiveness of the treatments.
- Community outreach activities
  - Participation in academic events
  - Guided site visits to groups of people of all ages and backgrounds (school children and their teachers, university students and professors, heritage professionals, civil servants, municipal employees, national and international park visitors) as seen in figure 13.
  - A leaflet was designed and printed and is distributed to park visitors.
  - A video and a publication with the results of the project are being developed.

By the end of 2014, this project will have delivered to institutions and the community more than 1000 m^2 of documented and conserved stone surfaces with hundreds of pre-Hispanic pictographs, and paintings of five prominent citizens from 1915, making it the biggest rock art conservation project in Colombia.

Because the archaeological survey contributed to the understanding of rock art and offered interesting information about the history of the region, this project can also be considered enlightening. It shows evidence of site occupation from the pre-ceramic period that may date from 3000 years ago.

Additionally, this is one of the few examples in the country where archaeologists and conservators have had the opportunity to work together, to show visitors an interdisciplinary way to address a heritage site.

3.3 SOCIAL INFLUENCE IN CONSERVATION AND PRESERVATION

This example shows how a legal action started by the community can result in a very important project that is not only achieving rock art conservation, but also contributing to the understanding and dissemination of information about Facatativá archaeological heritage.

Fig. 12. Consolidation of paint layers on the 1915 painting in 2014 (Courtesy of M. P. Álvarez)

Fig. 13. Visitors to the archaeological excavations in September 2014 (Courtesy of C. Leiva)

It also demonstrated that because cultural heritage is protected by Colombian law, if an institution is charged with the protection of a heritage site, conservation responsibilities cannot be neglected.

Apart from the legal action started by the community in 2007, there have been several local initiatives that have led to educational activities on the site in the past 9 years. Groups of park guides and "Vigías de Patrimonio Cultural" have consolidated in Facatativá contributing to appreciation of the local cultural heritage.[3] These groups are informing park visitors and developing educational and interpretive activities with local populations, mainly children and young adults, for example, the educational program Ie Cho Zhusgoskua Semillero de Investigación Vacatatyba developed during 2014 by Fundaciónen Tierra de Sombras.

These local initiatives have been strengthened by workshops organized between 2006 and 2007 by ICANH. Additionally, international rock art seminars organized by Grupo de Investigación de Arte Rupestre (GIPRI—a nongovernment rock art research group) and funded by local municipal and regional governments have taken place twice at Facatativá.

Some Colombian indigenous groups have always considered Facatativá a sacred place. Recently formed indigenous communities of the highlands of Cundinamarca and Boyacá, who are heirs to ancient indigenous communities, have now taken up the practice of their religious ceremonies in the park, celebrating Mother Earth and their ancestors, recalling the importance of this site.

Efforts undertaken by ICANH during 2003 and 2007, and by the local community through the legal action of 2007; educational activities carried out since 2006; and the indigenous communities' appropriation have clearly resulted in more visibility for the archaeological site and the involvement of other institutions. In the past 2 years, the municipal government and the National Foundation for Archaeological Research have supported other projects for the documentation and study of materials from the Facatativá pictographs (Muñoz et al. 2013).

The local government became responsible for the management of the park in 2012. It is now actively engaged with the ongoing projects. The park is receiving considerable financial resources because it receives nearly 70,000 visitors a year. Because of the bureaucracy of local public authorities, however, the park administration has not yet managed to increase the budget for security and fence maintenance. These are critical aspects that should be considered in order to improve management and heritage protection. Past mistakes should not be repeated. If these management issues are not resolved, the cultural heritage in the park could be at risk again.

4. CASE STUDY 3: MONUMENTS IN PUBLIC SPACES IN BOGOTÁ

4.1 BACKGROUND

On the topic of contemporary and historic heritage, I will describe a negative situation generated by the political and social context of Bogotá (population 8 million) that has affected monuments in the city's public spaces. Ironically, this situation has also generated possibilities for developing conservation research and community outreach activities.

Bogotá's public spaces are constantly tagged with graffiti. There are many different types of graffiti: some with political content, others with social content expressing interpersonal feelings or displaying sports affinities, while still others are purely artistic expressions.

The graffiti movement has appeared in force in Bogotá in recent years and today is recognized as an important component of urban culture. The hip hop movement considers graffiti an artistic component of their culture. This artistic expression is expanding, invading public spaces and affecting public monuments. The District Institute for the Arts (IDARTES) has organized forums and roundtables with the graffiti activists to identify spaces where they can continue their practice (fig. 14), thus achieving a "truce" with this community.

Recently in Bogotá, the responsibility for the care of monuments in public spaces was transferred from the Urban Development Institute (IDU) in charge of public works, to the local cultural heritage institution: the District Institute for Cultural Heritage (IDPC).

Fig. 14. Graffiti corridor from Calle 26, Bogotá (Courtesy of M. P. Álvarez)

The IDPC has involved conservation professionals in the study, documentation, restoration, and maintenance of monuments in public spaces. Following IDARTES initiatives, it is developing activities with graffiti activists and citizens in an effort to make them understand that monuments in public spaces should be preserved.

This is a great improvement that has benefited the monuments and the conservation field. Expertise and experience in stone and metal conservation now support maintenance of the monuments, and several efforts have been made to identify sustainable conservation solutions.

4.2 PRESERVATION OUTCOME

A large percentage of the affected monuments, or at least their pedestals and bases, are made of sandstone. Sandstone is a granular rock, so once graffiti is applied, the paint penetrates the surface and removal of graffiti becomes extremely complicated. Solvent mixtures and products for the removal of graffiti are not completely effective and it becomes necessary to use abrasive methods, as seen in figures 15 and 16. This is not considered the most appropriate procedure to do repeatedly on stone. Often the graffiti reappears almost immediately after the surfaces have been cleaned.

While coordinating a project for the maintenance of some of the most representative monuments of the city in 2013, we proposed the use of anti-graffiti coatings to the IDPC. We felt this was advisable based on the frequency of necessary graffiti removal.

In Colombia there was no research being done on this topic. The IDPC decided to support a research project studying anti-graffiti products made in Colombia, or imported but easily accessible in the country. The research evaluated more than 10 commercial products (from water repellents to coatings) from three different manufacturers: Islecar, Hidroprotección, and Nanoword. Acrylic polymers and silicone-based products with hydrophobic characteristics were tested on sandstone. The selected product, Recubridormade by Islecar, is a dispersion of acrylic polymers. It worked well because it did not change the rock's color or gloss, and it sustains the removal of at least two layers of graffiti while still providing protection to the stone. Moreover, the local manufacturer could ensure its availability. The manufacturer recommended a brush application of three layers of the product in order to achieve a better protection of the local sandstone (Logreira 2013).

The selected product was applied to five sandstone monument pedestals and bases after conservation procedures were carried out. The conservation activities included the following:

- Cleaning of stone surfaces
- Removal of graffiti with chemical and mechanical methods

Figs. 15 and 16. Graffiti removal at *Jimenez de Quesada* monument with abrasive sandblasting and other abrasive methods. Restoration process carried out in the second semester of 2013 (Courtesy of A. Logreira)

Fig. 17. *Simon Bolivar* monument before the first conservation treatment carried out in 2013 (Courtesy of M. P. Álvarez)

- Treatment of joints, fissures, and fills. Considering that the selected product is hydrophobic, joint and fissure fills were very important to minimize future conservation problems.
- Stone repairs and replacements

The *Simon Bolivar* and the *Jimenez de Quesada* monuments are two of the monuments to which Recubridor was applied. They are located in the historical heart of the city. The *Simon Bolivar* monument stands in the middle of the Plaza de Bolivar, which is surrounded by the cathedral and other important buildings, such as the National Capitol building, the Supreme Court building, and the Mayor's Office building. This main square and all the buildings surrounding it are made of sandstone and offer multiple surfaces to graffiti artists. It is a place where political and social protests very often take place (fig. 17).

The *Jimenez de Quesada* monument is located in a square surrounded by the country's oldest university, a main street, and some old cafes. This area is considered the birthplace of one of the most recognized soccer teams in the country (Santa Fe team).

The anti-graffiti coating was applied to buildings surrounding the Plaza de Bolivar, and to the *Simon Bolivar* and the *Jimenez de Quesada* monuments. Figures 18 and 19 show the *Jimenez de Quesada* and *SimonBolivar* monuments after their conservation in 2013.

The application of the anti-graffiti coating allowed a more effective second cleaning of the sandstone surfaces in Plaza de Bolivar and the *Jimenez de Quesada* monument, contributing to improved conservation of these stone materials (Álvarez and Logreira 2013).

Fig. 18. *Jimenez de Quesada* monument with anti-graffiti coating after its conservation in the second semester of 2013 (Courtesy of A. Logreira)

Fig. 19. *Simon Bolivar* monument with anti-graffiti coating after its conservation in the first semester of 2013 (Courtesy of M. P. Álvarez)

After the *Jimenez de Quesada* monument was cleaned for the second time and the anti-graffiti coating was applied, the Santa Fe rival team fans (Millonarios team) painted their shield on the monument. Then the Santa Fe fans offered the IDPC their help to clean the monument. This was done with their help and under the supervision of a professional conservator, showing an interesting example of cooperation.

Considering the vulnerability of the Plaza de Bolivar, another strategy has been implemented for the protection of the *Simon Bolivar* monument. When news of upcoming political protests or demonstrations is known, IDPC staff covers the monument with a plastic liner specifically designed with the color and pattern of the monument pedestal. After demonstrations are over, the graffiti-covered liner is removed and cleaned, and can be used again. This is a simple procedure that has improved conservation sustainability.

4.3 POLITICAL AND SOCIAL INFLUENCE IN CONSERVATION

The previous examples illustrated several situations that Bogotá has experienced. On the one hand, Bogotá is the capital city of a country with many social and political problems. Citizens should have the freedom to express their complaints through graffiti. On the other hand, this practice has covered historic walls and monuments. The authorities of the city are recognizing graffiti as an element of urban culture and have assigned public spaces for graffiti artists. Bogotá is also a city where art and heritage issues have gained importance in the last decades. This is illustrated by the allocation of economic resources for conservation and preservation of monuments in public spaces.

The situation of monuments in public spaces is very challenging. Most of them are in very bad condition and are not appreciated by the common citizen. Thanks to IDPC's recent efforts, there is hope for the future.

Conservation professionals are finding sustainable solutions such as the use of anti-graffiti coatings on monuments or linings that protect against graffiti attacks during political protests and demonstrations. Their effectiveness depends on an ongoing monitoring effort.

IDPC has been working on the dissemination of information about monuments and efforts undertaken for their preservation.[4] This is being done with the help of the local media, such as newspapers, radio, and TV news, and also with focus groups. In 2014, IDPC proposed an "Open Doors Restoration" journey for a group of graffiti activists and soccer fans during which conservators explained their work while carrying out the conservation of the *Ricardo Palma* monument. This is an ongoing outreach effort that needs to be extended to other populations.

Community involvement and education are activities that require time, continuity, and economic resources that are not currently available. This year the IDPC is trying to secure funding for monument preservation through the program "Adopt a Monument" that seeks to involve the private sector in this responsibility.

5. CONCLUSIONS

Through the examples of the *Fuente de Lavapatas*, the Facatativá pictographs, and monuments in public spaces in Bogotá, we can see how social and political issues affected preservation efforts in different ways.

In the case of the *Fuente de Lavapatas*, recent documentation and conservation studies demonstrated that some carvings in the fountain are at risk. It also showed that monitoring was a critical prerequisite to making effective conservation decisions. Nevertheless, since 2013 no more funding has been allocated for the study or conservation of this site. The leadership of ICANH does not consider the preservation of the *Fuente de Lavapatas* a priority, illustrating how much preservation issues are affected by political decisions. In order to ensure continuity of conservation projects, institutions must consider them a priority, stand by their commitments to maintain them, and allocate the economic resources required for their preservation.

The case of the archaeological park of Facatativá illustrates how important community participation and civilian supervision are for heritage preservation. In recent years, several active young members of the community and rock art researchers have been developing and implementing documentation, educational, and interpretive activities with the pictographs. The legal action of 2007 resulted in the CAR paying for the protection and conservation of the pre-Columbian pictographs and the archaeological study of the site undertaken between 2013 and 2014. This resulted in the rediscovery of the site's archaeological and historical values. Thanks to the involvement of indigenous communities, the site has recovered its spiritual value and today it is not only a recreational park but also a sacred site, which recalls the importance of Mother Earth and the ancestors. Today, the current administration of the park should embrace community commitment and invest in security concerns and fence maintenance in order to ensure the protection of the pictographs. It should avoid repeating past mistakes that did not take into account the different values of the site.

Finally the case of monuments in public spaces of Bogotá shows how much the social and political context that affects preservation can be managed and slowly changed. This change required political commitment from local government, funding from public and private sources, and the implementation of several strategies that can improve conservation outcomes and community outreach. These strategies are as follows:

- Technical aspects such as the use of anti-graffiti coatings and protective linings for the monuments
- Social actions involving communities (such as graffiti activists and soccer team fans) in conservation and educational activities
- The dissemination of projects carried out by the IDPC for the study, conservation, and maintenance of monuments in public spaces to a broader population through TV channels, radio, and newspapers
- Funding for these projects that involves the private sector in cultural heritage protection

It has become clear to us that the preservation of cultural heritage is subject to political and social contexts, not only to widely acknowledged deterioration factors such as the environment, human, or biological activity. Understanding these forces, taking them into account, and being able to anticipate the resulting outcomes can lead to better heritage management and more sustainable practices for the preservation of monuments and sites.

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NOTES

1. ICANH is the institution in charge of the protection of the national archeological heritage.

2. Tuff (from the Italian *tufo*) is a type of rock consisting of consolidated volcanic ash ejected from vents during a volcanic eruption.

3. This is a program sponsored by the Ministry of Culture to train local citizens in the knowledge and appreciation of their cultural heritage, who work on outreach activities with the community. http://vigias.mincultura.gov.co/Lists/EntradasDeBlog/Post.aspx?ID=11 (accessed 12/14/14).

4. www.patrimoniocultural.gov.co/patrimonio-material/monumentos.html (accessed 12/14/14).

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SOURCES OF MATERIALS

1R3-Rocima 363
Dow Chemical Company
1-899-4474369
www.dowmicrobialcontrol.com

Preventol CD-601
LANXESS Material Protection Products
www.protectedbylanxess.com

RemmersKSE 300, elastified RemmersKSE 300 E, Remmers Antihygro, tartaric acid 0.14% diluted in alcohol
Remmers Baustofftechnik
Bernhard Remmers Strasse 13
49624 Löningen
041 05432/83-0
www.remmers.de

Recubridor
Islecar Group
Carrera 76 no 71-75
Bogotá, Colombia
0571 7028991
www.islecar.com/

Nanoflex TPM 100
Nanoword
Paseo de la Reforma 250 Esquina con NizaPiso 8. Col Juarez del Cuauhtémoc
0055 36007774
www.nanodepot.com

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