

# Promoting Conservation in the archaeological site of El Purutal, San Agustín WHS, Colombia

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The archaeological site of El Purutal is located in the municipality of San Agustín, Huila department, in the south of Colombia, 1800m over sea level. The region is surrounded by several important remains from the Upper Magdalena culture (9 century BC to 9 century AD) like the archaeological Parks of San Agustín (WHS) and Alto de los Idolos (WHS), La Chaquira and El Tablon that shows numerous sculptures, burial mounds and tombs.



Floor plan of the burial mound of El Purutal. Cubillos, 1997



Dolmen and sculpture N° 162



General view of the burial mound of El Purutal



General view of dolmen and sculpture N° 161



Sculpture 162 in 2011 before and after the removal of the repair. The graphic shows the areas where the newly added color was applied.

According to radiocarbon data, the sculptures from El Purutal were carved, painted and buried in the 6th century. Their polychromy was well preserved covered by the earth until 1984 when a peasant discovered the sculpture 162. At that time, an archaeological survey was led by Julio César Cubillos and the site that has one tomb, two sculptures and their dolmens was reconstructed. Since then, protected by a shelter and with a poor system of surveillance the site has become one of the most visited in the archaeological area of San Agustín.

In the beginning of 2011, someone covered the polychromy of the sixth century sculptures with contemporary paints (oil based paint and vinyl). Instead of showing their age, these sculptures looked renewed and had the appearance of being false documents of the past.

Alarmed by the damage caused on these important sculptures, the Colombian Archeological and Historical Institute decided to hire conservators Maria Paula Alvarez and her collaborators Isabel Cristina Quintero and Camilo Betancur during Holy Week of 2011 (the peak of the tourism season) to conserve the sculptures. The conservation activities included removing the newly added paint layers and recovering the original polychrome of the sculptures from El Purutal.

## Methodology and procedure

The treatment began with a photographic record of the sculptures and solvent testing. There are conservation procedures that allow for removing layers of varnishes or paintings and preserve underlying layers and original polychromy. These procedures involve the use of organic solvents which are volatile substances that do not leave residues and allow the elimination of paint layers in a selective way. The most effective solvents were used to remove the recent paint (red, yellow and brown) without affecting the original paint layer.



In each color different solvents and those of solvents where test. Once the best mix was selected, the removing was carried out in selected areas.



Sculpture 161 in 2011 before and after the removal of the repair. The graphic shows the areas where the newly added color was applied.

## Results and observations from the conservation treatment.

The removal of the contemporary colors in the two sculptures was satisfactory and reached a good balance of cleaning and preserving the original polychromy. However, in some small areas where the stone presented decohesion and the original paint layer was damaged the contemporary retouching could not be removed. Therefore, some of the newly added paint in some specific areas was left.

The removal of the yellow was easy, a mix of alcohol and destilated water was applied with cotton swab obtaining good results. On the contrary in areas covered with brown and red the removal process was more demanding, especially on top of fragile surfaces in bad state of conservation.

For removing the brown color a mixture of acetone, alcohol and destilated water has to be used and in several areas it was necessary to insist with a plastic brush.

The red newly added paint was oil-based, then organic solvents like ethylacetate and dimethylformamide has to be used. This paint had adhered well to all surfaces including the surfaces where the original color is missing, then the removing was laborious. In the areas where the red color was applied directly on top of the stone, the fiber glass pencil was carefully used for removing the oil based paint layer.

Once the removal was finished a siliconic sponge (WishAB) was used giving a last cleaning to the recovered original polychromy.



For removing contemporary paint layers organic solvents were applied with cotton swabs and soft brushes during the conservation process carried out in Sculptures 161 and 162 in 2011.

During the excavation of the sculpture 161 in 1984 the head was separated from the body but both parts were exhibited together until 2005 when someone tried to lift the head. The ICANH alarmed hired a group of conservators led by Maria Paula Alvarez that adhered the 2 parts with resins. They used a mortar with similar characteristics of the stone for filling the empty spaces.



The re-anchoring of the filling with mortar applied in 2005 was repaired in 2011 with mineral pigments.

The inability to fully remove these contemporary paints and the fact that the sculptures were repainted prove the threat to the preservation of these sculptures and the need to reduce vandalism through community involvement.

During the onsite work, the conservators patiently explained the procedures carried out on the sculptures in simple terms to visitors, guides, tourist services providers, park officials, and inhabitants of the region so they would better understand the threat to their preservation. Once the conservation process was finished, several conferences for presenting it were given in San Agustín municipality.

The community response was very positive. People expressed both admiration and curiosity to learn about the characteristics of the original materials, the results of previous studies, and the details of the conservation process that allowed the recovery of original paint layer. They also showed interest in the discipline of archaeological conservation in Colombia and understood the importance of being involved in the task of preserving cultural heritage.

## Conclusions and recommendations for further study.

The conservation process carried out in 2011 showed that the sculptures in recent years have suffered several episodes of vandalism which is a significant factor of deterioration that has irreversible consequences.

Considering that the vandalism is one of the main causes of the deterioration of El Purutal sculptures, it is essential that all stakeholders get involved and apply appropriate measures to achieve the protection of the site.

It is important that the responsible governmental institutions and conservators make periodic site visits to carry out monitoring and work with the community to raise awareness on the importance of protecting archaeological heritage.

The educational approach under which this conservation project was developed that included the involvement of visitors during on site works, contribute not only to the recognition of the values of this important archaeological site, but also raised awareness on deterioration and conservation issues, for the long-term protection of the sculptures.



Conference about the conservation process carried out in 2011. Casa de la cultura, San Agustín Municipality.

Once the newly added paint layers were removed, the degradation of the sculptures polychromy became evident. The black spots on the nose of the sculpture 161 have increased; probably because people often wet the surface of the sculpture to appreciate the original colors. In the sculpture 162 new spots have appeared on the left side of the face, the neck and the torso. Some of these spots are foreign material applied by visitors on the polychrome surface. Others have a natural appearance (resinous), or were caused by the migration of minerals on top of the surface. In order to determine the exact nature of the spots described above it is necessary to carry out laboratory tests.

Sculpture 162. State of the polychromy in 2000. The cement from the reconstruction of 1984 is visible in the upper and left part and the degradation of the black color was already evident.

Sculpture 162 in 1984 when it was found by the archaeologist.

Sculpture 162. State of the polychromy in 2011. The black color has stains and the appearance of red and white areas is less homogeneous.

Sculpture 162. Reconstruction of the original polychromy.

Results from the microscope analysis (SEM). The high Fe content of red and yellow samples demonstrated the presence of hematite, goethite and clays.

Sculpture 161. State of the polychromy in 2000. The degradation of the black color was already evident.

Sculpture 161. Reconstruction of the process of application of the colors. (Bateman, 2007)

Results from the microscope analysis (SEM) from 1980. Due to the high amount of Al and Si, the white color correspond to a clay (illite) and the high amount of Mn from the black indicates that it is pyrochlore.

Stratigraphy of yellow and red colors in the sculpture 162. Several analysis were carried out in 1980. SEM and XRF allowed to establish the mineral pigments, and FTIR demonstrated the use of a natural glue in the polychromy.

Stratigraphy of black and red colors in the sculpture 161. According to the analysis in the polychromy of these sculptures the black is composed not only of iron products but also from natural coal.

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