

Children in the cave: decrypting old messages

Bibiana Vilá and Yanina Arzamendia. VICAM, Argentina.

Our research group VICAM (vicuñas, camelids and environment) has been working in Barrancas, in the Andean altiplano of Jujuy, Argentina, with a diverse programme that includes "the Barrancas Archaeological Project". In this project we work with the local community and authorities in a heritage conservation plan, especially rock representations (Yacobaccio et al. 2020). The ancestral relationship between the community and the camelids can be traced from the past in the caves and rocky walls of the area and gives a biocultural continuity that is very decisive for the local identity.

Rock art is very important because it reveals information about the forms of creation and symbolic thinking. That is, how the elements of the natural and social environment are perceived and selected to be the subject of the painting. Rock art also represents biodiversity and nature's contributions to people (CNP) since it shows animals and plants in relation or not to representations of human beings.

One of the places that concentrates a remarkable amount of valuables cave paintings and engravings is the Barrancas river basin, declared a Natural and Cultural Reserve by the Municipal Commission in 1994. This declaration was the output of the joint efforts and management of local people and several institutions as local and provincial authorities, National University of Jujuy, National Research Council and the VICAM Barrancas Project.

It should be noted that the area has a CIA (Archaeological Interpretation Center) inaugurated in 2021, that clearly show and explain the research done in the area and its heritage value.

Barrancas area can be considered a socio-ecological production landscape (SEPL in its acronym in English) according to the definition of the International Association for the Satoyama Initiative (IPSI). It is precisely because it is a socio-ecological landscape that we are carrying out a project of the Satoyama Development Mechanism (SDM). One of the objectives of our project is the participation in local school activities to promote the appreciation of the multiple values of the surrounding biocultural heritage sites and the pastoral livelihood.

As part of this objective, an activity was designed with the Barrancas primary school to bring girls and boys closer to the local biocultural heritage, with a field trip to an emblematic space of the area: the caravanner's cave.





The caravanner's cave is the closest archaeological site to the town, it is located at 560 m on the left bank of the river at 3567 m. It has a high diversity of motifs, but 76% are representations of camelids, mostly llamas. It also has the most elaborate shield man or unku in the valley, which has been adopted as an icon of the town. The cave groups 183 motifs made over a long period and by different social groups that populated the valley. There is overlap and an age is estimated from 3,500 years to 500 years before the present.



From the cave the Barrancas town is observed

We met with the headmistress of the primary school (No. E 279 Abdon Castro Tolay) and agreed the joint interest of VICAM and the school to carry out activities in pursuit of the appreciation by girls and boys of the biocultural heritage of the zone. We decided to walk from the school to the "caravanner's cave."

The activity was carried out on Wednesday, August 11, in the afternoon, starting at 2:00 p.m. The outing was attended by the headmistress of the school, two teachers, three members of VICAM and 37 children between 6 to 13 years.

To enter in the cave, we made small groups of 6-8 members accompanied by an adult. They were greeted in the cave by a member of the team. The groups entered successively in such a way that not many people were inside the cave at the same time. The school teachers had not visited the cave before, and about half of the girls and boys came to the cave for the first time.

H2





Group of girls and boys and teachers in the Barrancas walls (where the cave is located)

Once in the cave some girls and boys expressed:

Regarding the cave in general

"The cave is very beautiful and it is very written and there are animals, many animals, an eagle, some llamas, a snail, some T-shirts" (regarding the unkus) ... (6-year-old girl)

"The cave was formed with the hills that fell to which it was formed, and the ancestors began to put all of their culture and all their livestock, then they began to make a house here" (11year-old girl and companions)



Recording children's opinions and comments



Regarding the figures of the llamas and other figures

"They left messages about their livestock, how they dressed, what happened".

Girls and boys differentiate between the paintings that are groups of llamas and those of caravans : "there are llamas together in a troop and llamas in a row, in a line, caravan llamas" (recorded 179 several children).

"Before the town existed, a group of llama animals and caravans carried things from here to another part and brought them" (13-year-old boy).

"First they started with the llamas and then (drawing) what was happening, those little houses can also be the tombs of the dead in the war would be the final paintings because the Spanish were already arriving, and we were without guns or anything, so we thought that the dead are here in the paintings "(recorded 180, 11-year-old girl)

Regarding the value of the cave

Children said: "Admire the cave, take pictures of it, look at it, take care of it.... Take care of her: do not throw garbage, do not hit her, do not touch, put a signboard outside. ... It cannot be touched because our culture can be erased and erased, [discussion between the girls and boys that if the images are erased, their culture will be erased or not]. If our culture is erased we are left without culture, something that would affect us a lot with tourists, and losing all our origin. (recorded 180, several girls and boys)

This cave must be cared for, because it is our culture and our origin, what it has been telling us for years... (11-year-old girl)



Headmistress with some younger girls and boys. On the left the paintings of groups of llamas and on the right on the ceiling the caravans.



Discussion

The caravanner's cave is an iconic place in Barrancas. The girls and boys during their visit have shown remarkable capacities to interpret the painted figures, their relationship with the socioenvironmental history of the area. The appropriation of their heritage is essential for girls and boys to reinforce their communal belonging, establish interpretive criteria, and design actions for the protection and management of the cave.

Cave paintings can be understood as a materialization of biocultural memory defined as "localized wisdoms that exist as community historical consciences" (Toledo and Barrera-Bassols 2008). Girls and boys interpret contexts of creation and messages in them. The children themselves refer to their ancestors, and they can even tell their own sequential story in the cave, integrating groups of llamas, caravans, arrival of the Spanish, war and tombs.

It is interesting to note that the girls and boys propose cave care measures because the cave has no access restrictions and shows some deterioration and vandalism.

The relationship that girls and boys establish with the paintings and their culture and the discussion of the need for the painting existence as a cultural anchor, stand out. It is remarkable the sense of origin (clearly the girls and boys recognize themselves as descendants of those people who painted the cave) and the economic importance of the site that attract tourists.

Although it has been developed for the links between people and biodiversity, the classification of valuations of Arias-Arévalo et al 2017, can also be applied in this context, in the way that children give an account of the cave paintings. The appreciation from "the cultural and original" can be interpreted as a relational value, that is, it highlights the importance attributed to significant relationships and responsibilities between humans and the biocultural heritage materialized in the paintings. It also emerged in the exchanges that the cave must be cared for because it is "beautiful and written", which could be considered an intrinsic valorization or existence value. Regarding the importance of paintings as a tourist attraction, it is a clear reference to the instrumental value, as a source of services and benefits since the town of Barrancas and many of its inhabitants receive income from activities related to tourism, such as the sale of handicrafts (llama wool fabrics), guiding tasks, food preparation, etc ...

The importance of dialogues between scientists and community members, and intergenerational dialogues, of adults and children, enrich the way we can develop a sustainable future for Barrancas. The "montology" (Sarmiento 2020), a transdisciplinary science of mountains includes this kind of intercultural, intergenerational and interdisciplinary exchanges. Sarmiento et al (2020) also propose a pedagogy that takes into account the importance of the "hybrid" landscapes where nature and culture interact. The cave is an excellent example of this hybridization and the children's new interpretations also update and re-inform it.

<u>Acknowledgments</u>: To the members of the of Abdon Castro Tolay Elementary School for being enthusiastic about this idea of joint work. To Florencia Bluske, student of the geography faculty at the National University of Lujan for assisting us in all the field work. This work was



supported by the Satoyama Development Mechanism (SDM) Funds from the Institute for Global Environmental Strategies (IGES) in Japan.Referencias

Arias-Arévalo P, Martín-López B, Gómez-Baggethun E. 2017 Exploring intrinsic, instrumental, and relational values for sustainable management of social-ecological systems. Ecol Soc.; 22(4). doi: 10.5751/ES-09812-220443

Sarmiento F. 2020. Montology manifesto: echoes towards a transdisciplinary science of mountains. J. Mt. Sci. 17, 2512–2527. https://doi.org/10.1007/s11629-019-5536-2

Sarmiento F., Oliva Cruz M., Fernandez Guimac, S. 2020. Montology: A Transformative Frame for the Future of Education About Mountains. Mountain Research and Development, 40 (4): A15-A27 https://doi.org/10.1659/MRD-JOURNAL-D-20-00031.1

Toledo V. and Barrera Bassols N. 2008. La memoria biocultural: La importancia ecológica de las sabidurías tradicionales. Icaria editorial. Barcelona.

Yacobaccio H., Solá P., Oxman b., Morales M., Hoguin R., Samec C., Pirola M., Rouan Sirolli M., Mamani H., Merler Carbajo J., Kohan P. and Vilá B. 2020. Camélidos, caravanas y guerreros. El arte rupestre de Barrancas (Jujuy, Argentina). Ed VICAM, Buenos Aires, ISBN 978-987-86-4296-3



Anexos: Acta de la actividad

-	Acta	Nº 18	
En	el local de la :	Escuela formas	in Nº 279 Abdon Cash
Siendo	las 945 del	ALL AL	a dato- Cochinoca, Juju
	A SULLAND	LECTER MARK	and a second
	and the	CO2DARBACIAS AL	I CONTACE A. I.
	eres all	FIR DIDADA	VIA in Ara V
Anamon	dia y la estudi	anti Florencia	BLUSKE de la UNICU,
guienes	propusition a	La militrain	iducativa voa salida
de car	mo en but	del March	The sanya una salida
Boult	in a de la	al resonation	into del patrimonio
Contraction of the	mar ou ca 10	an errod as B	common Para eillo
- A GIOS	do ventriar u	na caminata, d	vante la harde, en la
eval lo	niños y decen	to pudroion	apression los pinteras
aper h	es coraiten's	icas del área	i () () () () () () () () () (
Sean	ndo maliado	or el trahai	o an futuros encuentios
5.	í a i again	ce low la	former for encounting
- n m	as sue agrega	- Repring in	presence
10 ml	0 01	19 10	S
TAN	Britiana)16	and the second	aprice .
Labour	Dra Bibiana Vilá	1 al and a	PAGE ANA MARIA ARECO
1 Burnenden	VICAM	All and	18330 C. 13145
10		A REPAIR OF THE	