

# North Peru 2022

## Franco-anglo-peruvian speleological expedition in the north of Peru (Cajamarca, San Martín and Amazonas Regions)

A part of the team near the Tragadero of  
the Laguna Maria Gondolan (Granada, Amazonas).



### Organization :

ECA Espeleo Club Andino de Lima (Peru),  
GSBM Groupe Spéléologique  
of Bagnols-Marcoule (France), and  
two British cavers (UK).

*From september 6th  
to november 3rd, 2022*

## 2 – Meeting at Lima

James Apaéstegui is waiting for us in Lima, he have to give the the generator set and drill to us.

From left to right, Gino Staccioli, Peter Talling, Fleur Loveridge, Jean-Yves Bigot and James Apaéstegui.



### 3 – Departure by bus from Lima

Departure from Lima  
by night bus with  
Movibus company.



Fleur, Peter,  
Gino and Jean-  
Yves have to check  
in their heavy  
luggage before  
boarding the bus.

The bus at the  
Victoria station in Lima.

## 4 – A long trip

There are many problems on the Andean roads still under permanent construction.

The Lima-Chachapoyas journey by bus will last 28 hours...

One of many roadworks along the route through the Andean Range.

Floods and landslides of land are responsible for a lot of damage, such as this bridge over the Utcubamba River, near Bagua Grande.



## 5 – Luya

All club equipment is stored at Liz's mom in Luya near Chachapoyas.



8-9-2022  
9-9-2022



From left to right, Liz's aunt and mother, Antonio de Pomar, Fleur Loveridge, Peter Talling and Jean-Yves Bigot.

The material is subject to sorting and checking before being taken away.

Preparation of equipment at the clubhouse.

Loading of  
equipment in Luya.

## 6 – Trip from Luya to Granada

Trip from Luya to  
Chachapoyas by van  
with all the load.



In the Chachapoyas van (combi) in  
Granada, we find the whole team.

10-9-2022



Liz Hidalgo and Mirla  
Ramirez  
accompany us to  
Granada to clarify  
the situation with the  
authorities of Diosán  
and Yambajalca.

## 7 – Information meeting

A meeting in the school of Granada (community of Diosán) fails to convince the head of the community of Yambajalca who does not respond to our request for permission to explore the Pico del Oro area.



Mirla and Liz explain the interest of the karst of Granada.



The election period is not conducive to decision-making...

The audience is made up mostly of women, whose opinion counts for little in local communities.

## 8 – Cueva del Rio Cashcala

To spend the day in Granada, our guide Dario suggests that we visit the Cueva del Rio Cashcala.



It is a maze cave dug by the Rio Cashcala who was crossing a rocky outcrop.

The rocky outcrop is drilled by caves.



## 9 – Cueva del Rio Cashcala

The galleries are of good size and a survey of the cave will quickly impose itself.



The galleries of the cave are sometimes littered with rolled pebbles from the Rio Cashcala.

## 10 – Cueva del Rio Cashcala



You have to be careful, because human bones are lying on the ground.

The Skull Gallery in Cueva del Rio Cashcala.

# 11 – Cueva del Rio Cashcala

11-9-2022



The cave contains the remains of those who visited it. We find in particular the bones of a "Tigrillo", or Oncille (*Leopardus tigrinus*), a small feline from South America.

Mandibles of Tigrillo in Cueva del Rio Cashcala.

## 12 – Cueva del Rio Cashcala

The "majás", "majáz" or even "maráz",  
is a very popular animal in Peru.



A species of Paca  
(*Cuniculus paca*)  
living at low  
altitude.



This is a large rodent  
called "Mountain Paca"  
(*Cuniculus taczanowskii*).  
The men built traps in the  
cave in an attempt to catch  
the animal.

Majás trap in the  
Cueva del Rio Cashcala.

## 13 – Cueva del Rio Cashcala

The multiple entrances and galleries of the cave (dev.: 426 m) oblige us to devote some time to its topographical survey.



Galleries of the  
Cueva del Rio Cashcala.

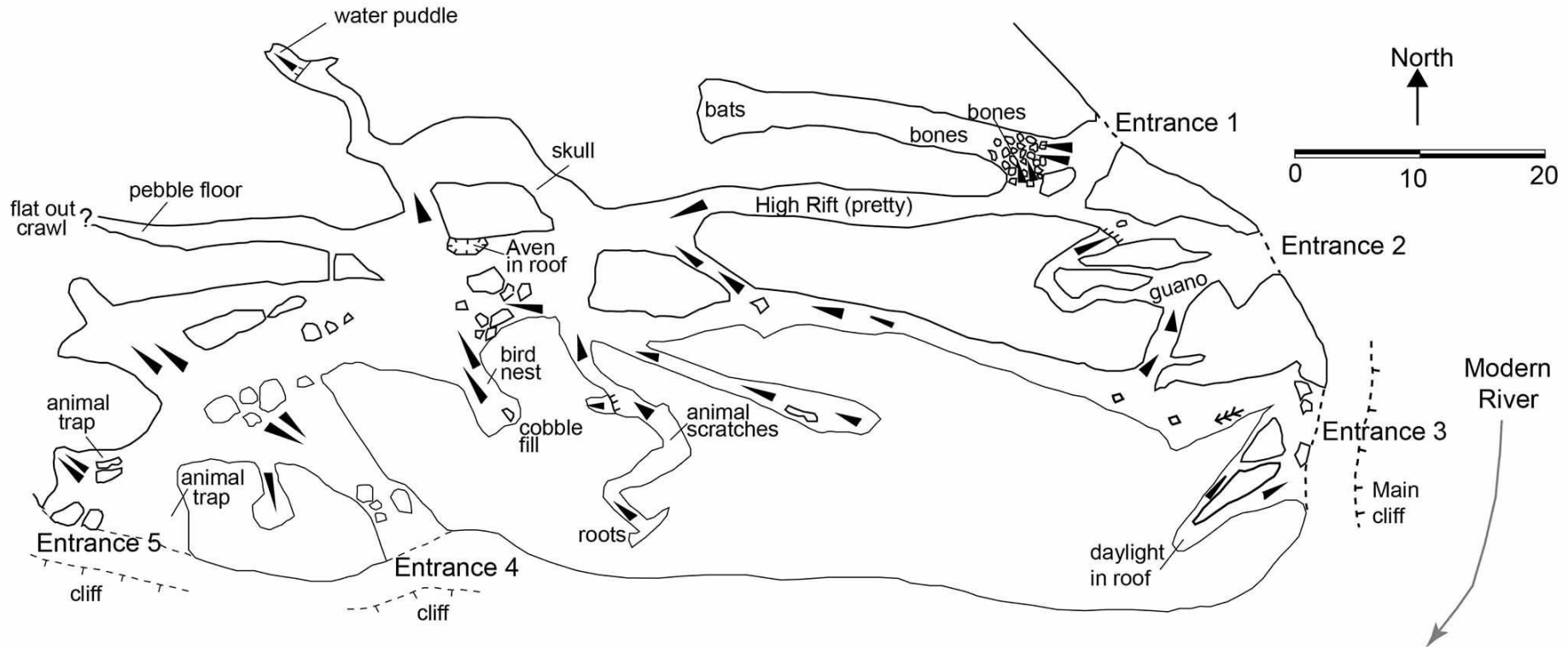
# 14 – Cueva del Rio Cashcala

Topography of the Cueva del Rio Cashcala in Granada.

Plan of the Cueva del Rio Cashcala.

## Cueva Rio Cashcala, Granada

Surveyed by Jean-Yves Bigot, Fleur Loveridge and Peter Talling (September 11<sup>th</sup> 2022) to BCRA Grade 5d  
06°06.998'S 077°37.052'W elevation 2956 m : Surveyed length = 426m, and depth = 20m

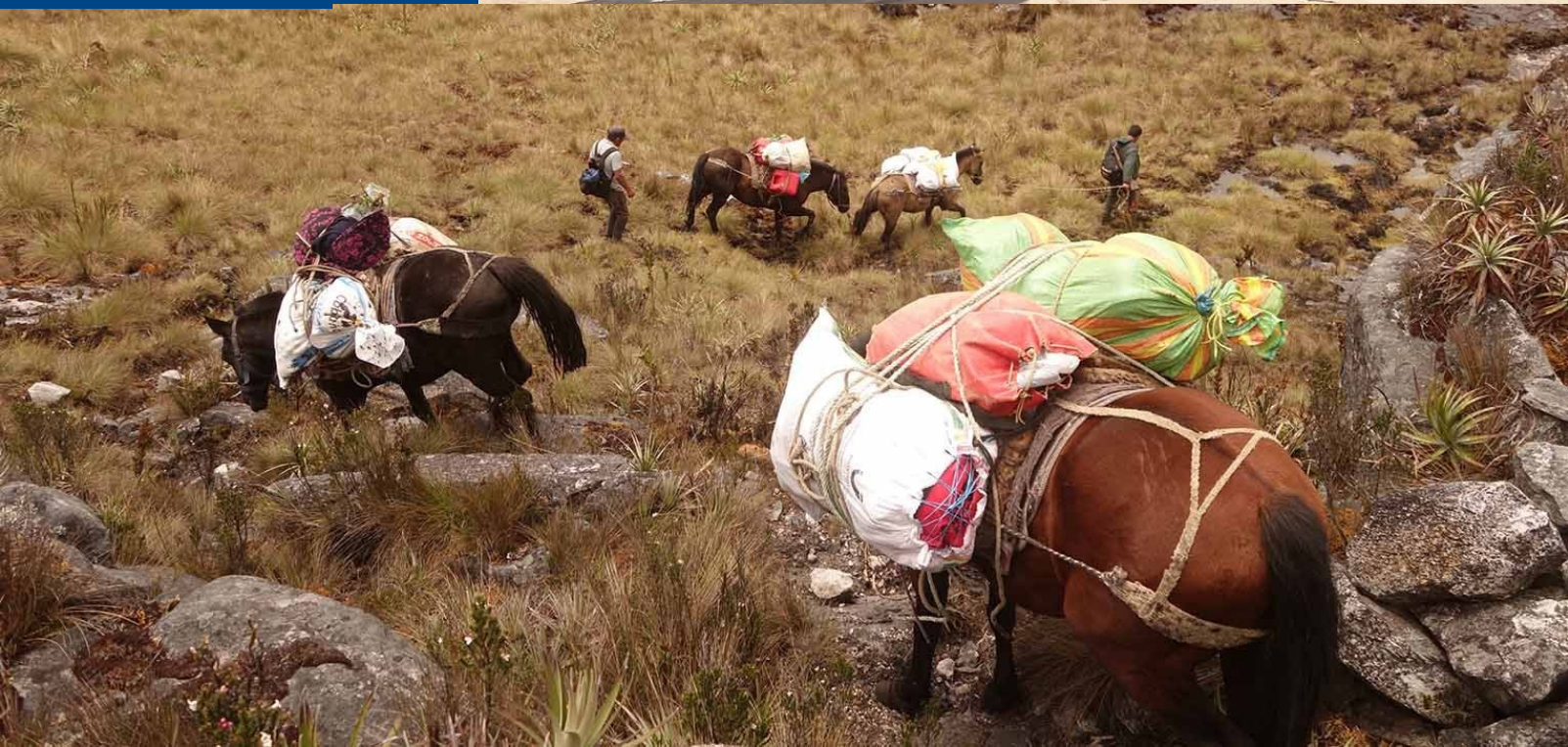


# 15 – Trip from Granada to Jacinto



12-9-2022

Horses packed  
in the Puna.



Despite the  
absence of  
formal  
authorization,  
we leave for  
Jacinto's  
camp.

## 16 – Trip from Granada to Jacinto

In the background, the so-called "Campanario" mountain and the "Siete Lagunas" lakes.



We leave the Siete Lagunas (literally "the 7 lakes")  
to cross a pass at an altitude of more than 3700 m.



# 17 – Trip from Granada to Jacinto

Drought and wildfires lit in the Puna are the cause of a devastated mountain.

Harnessing a horse after the fall of its load.



## 18 – Rest at Jacinto

After Peter and Fleur's food poisoning, a rest day at Jacinto's camp is decreed.

But in the distance, a fire has broken out and is now threatening the tents.



The Jacinto Camp.

A fire broke out near the Laguna del Tigre...

## 19 – Firefighters of the Puna



13-9-2022



The Puna firefighters  
are fighting the fire...  
lit by Dario and  
his family...

There is also a lot of smoke inside  
from Jacinto's thatched cabin...

A ground is  
waterlogged.

## 20 – *The Puna marshes*

It is not easy to walk in the  
marshy lands of the Puna.  
The sites are beautiful,  
but terrible for  
hikers.



13-9-2022



The tents were set up on a point  
high to avoid swampy places.

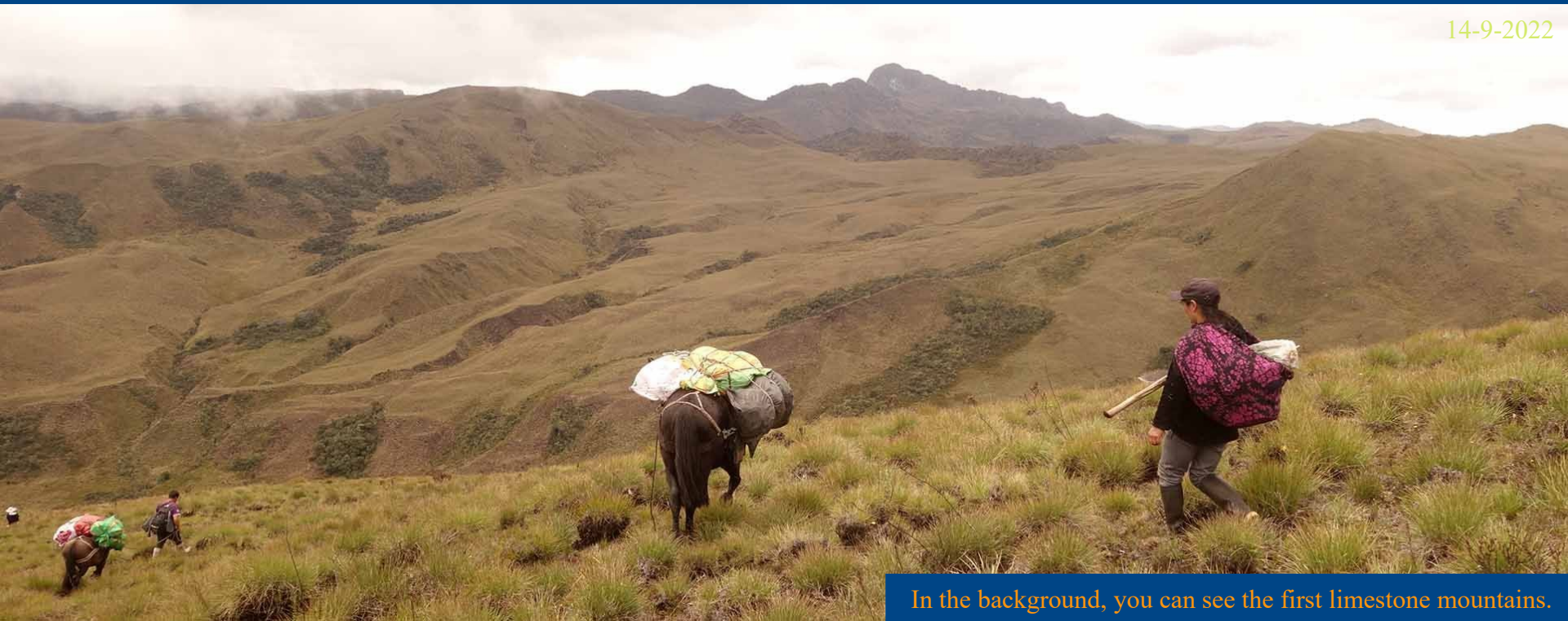
## 21 – Trop from Jacinto to Yana Cocha

Peter notes that we are less than 3 km by flight of a bird of a lens which he calls "Big Sink" (Tragadero Grande)...



The horses on the climb near the Laguna del Tigre.

14-9-2022



In the background, you can see the first limestone mountains.

## 22 – Reconnaissance in Rayo Urmana

In the afternoon, a first reconnaissance is attempted by Gino, Antonio and Jean-Yves towards the Rayo Urmana pass, not far from the Tragadero Grande.



Rayo Urmana's sinkhole requires the use of a rope.

Rayo Urmana's  
sinkhole

On the climb to the pass, Gino falls into a hole while walking and breaks two ribs... Tonio manages to extract it from the hole.



« Big sink »  
(Tragadero Grande)

The Big Sink (Tragarero Grande) is at the bottom of the ravine on the right.

## 23 – *The Rayo Urmana sector*

Yana Cocha's hut is very close to the karstic area, Peter and Fleur take the opportunity to take some pictures in clear weather.

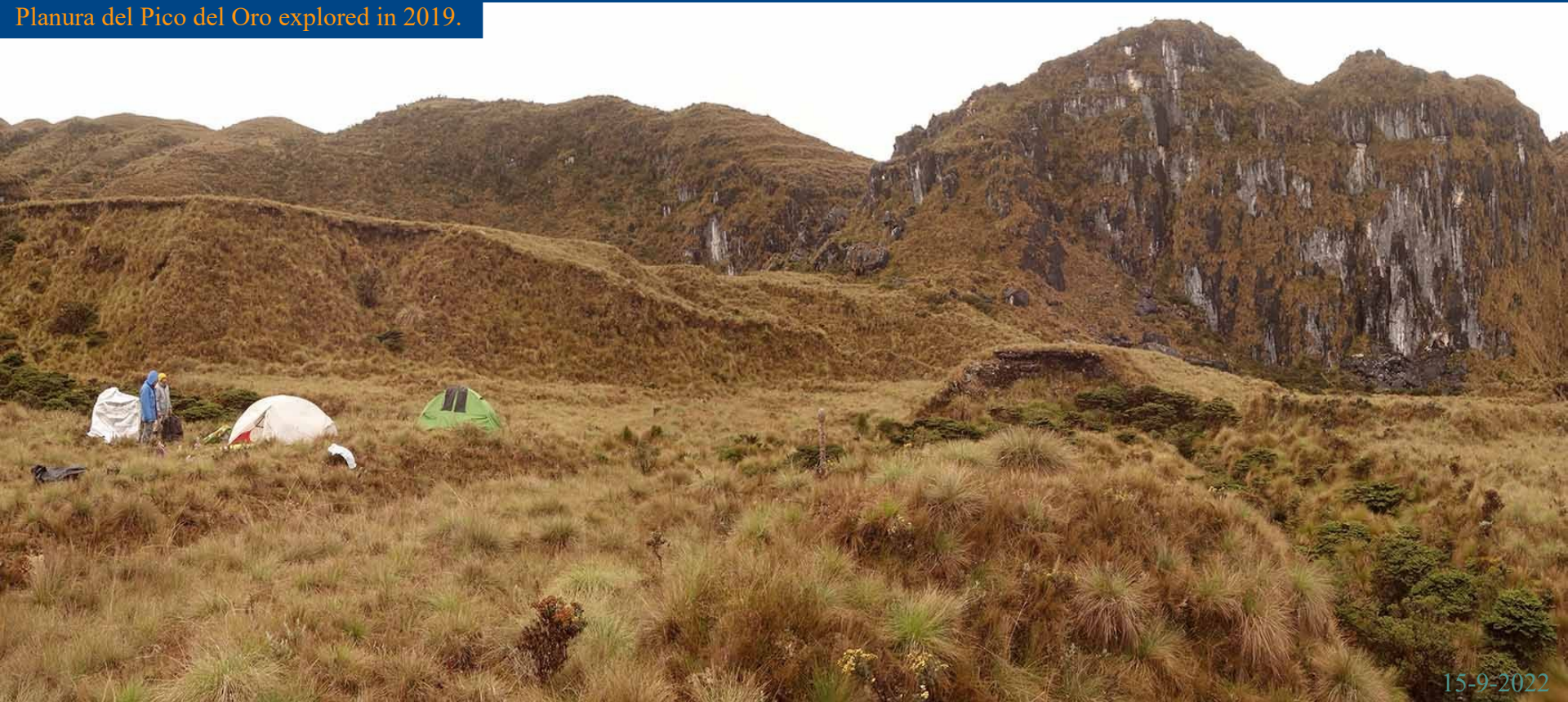
There, the karst begins.



## 24 – Forward camp of the Oro Pico

Camp near the Tragadero de la  
Planura del Pico del Oro explored in 2019.

Time passes and we realize that we  
have to do a reconnaissance  
beyond the Oro Pico.  
Two nights are planned.



15-9-2022

A light camp is set up near the sinkhole of the Planura del Pico del Oro.  
Dario drops off our camping gear and heads back to Yana Cocha's cabin.



The water is totally lost in the "Big Sink" (Tragadero Grande).

## 25 – Big Sink

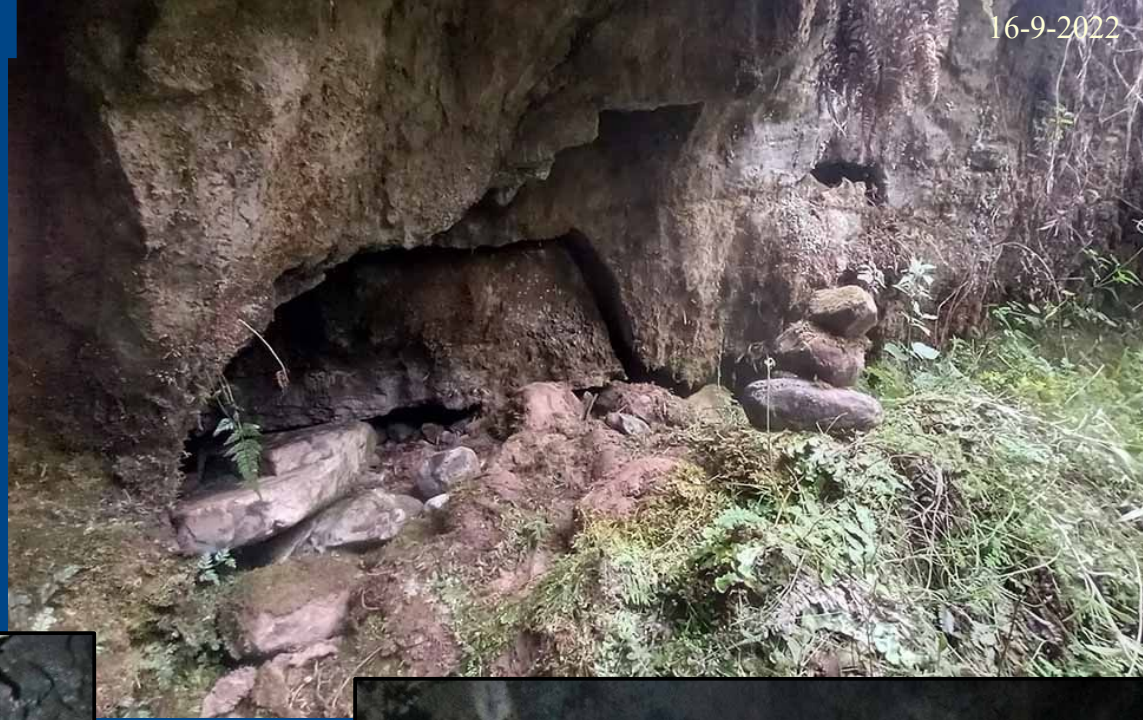
Meanwhile, Peter and Fleur recognize the Big Sink (Tragadero Grande) and other cavities of the Rayo Urmana sector.



Large flat-bottomed valley near Big Sink (Tragadero Grande).

## 26 – Big Sink

Peter returns to the Big Sink (Tragadero Grande) area and explores some small penetrable caves without reaching the bottom.



Deer skull (*Odocoileus virginianus*) in a cave.

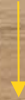


After a night spent at the foothill of Oro Pico, we leave behind us the forward camp, when a bear appears. Some consider giving up, but can we be afraid a bear that binges on bromeliads all day?

## 27 – *The bear*



Forward camp



The adventurers  
careful stay behind.

16-9-2022

## 28 – *The bear*

Despite a few cries to scare him, the spectacled bear does not want to go away and wonders who we are.



The Spectacled Bear  
(*Tremarctos ornatus*)  
is a small frugivorous ursid.

## 29 – « Into the Wild »

The presence of the bear indicates that we are in a completely wild area.

The only existing tracks are those of the White-tailed deer (*Odocoileus virginianus*) that we sometimes follow.

A wild karst landscape with no trails...



## 30 – A difficult terrain



The ground remains uneven and we follow contour lines as much as possible. We end up finding a small polje at the limit Oro Pico (waterproof) and limestone.

Small polje drilled by sinkholes.



## 31 – Too far from goals

The objectives marked on the views  
satellites are impossible to reach.  
In the distance, we see  
only mega-sinkholes  
that puncture the surface of the karst.

A karst that seems too vast for us...



## 32 – The wall

In the middle of  
this "virgin"  
karst, there is a  
built wall!



The wall delimits a closed park.

Antonio, Gino and Jean-Yves  
pose in front of their discovery.



It is an old park or enclosure,  
because in living memory,  
no one has been here for  
ages...

It's perhaps an installation  
of Inca origin, because the  
lama is the only pack animal  
to have been introduced  
formerly in the region.



## 33 – *Back home*

Return to the forward camp of the Planura de l'Oro Pico around 4 p.m., it starts to rain and the day has been busy.

Arrival in sight of the forward camp.



Gino prepares his morning coffee.

## 34 – Forward camp of Oro Pico

It was very cold that night, because the sky was clear.  
Dario is on point to load our material.



The two tents and the material shelter, made with the branches of small trees that grow at an altitude of 3270 m.

*35 – Return  
to Yana Cocha*



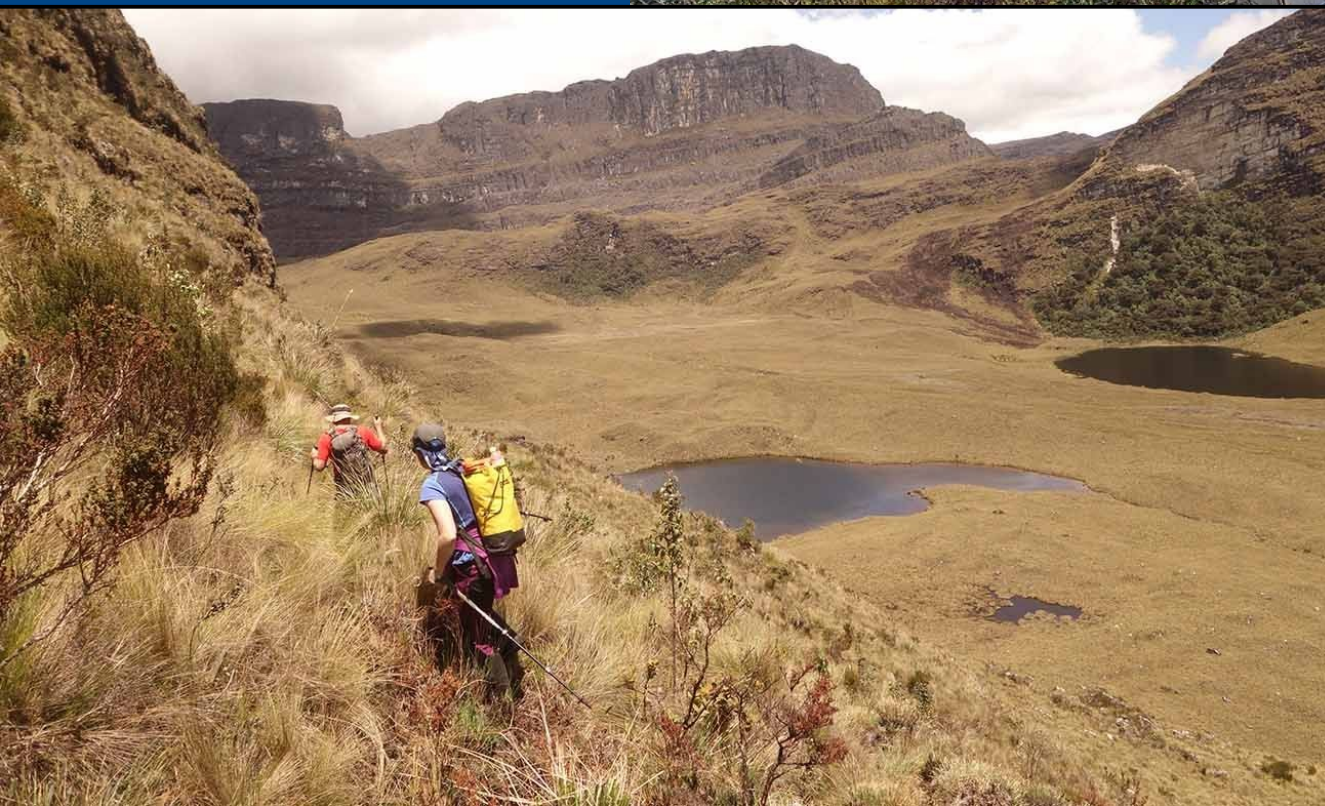
17-9-2022

Relative comfort  
of a tin shack.

Back in Yana Cocha, you have to plan the trips to Granada.

## 36 – Trip from Yana Cocha to Jacinto

Departure from  
Yana Cocha camp...

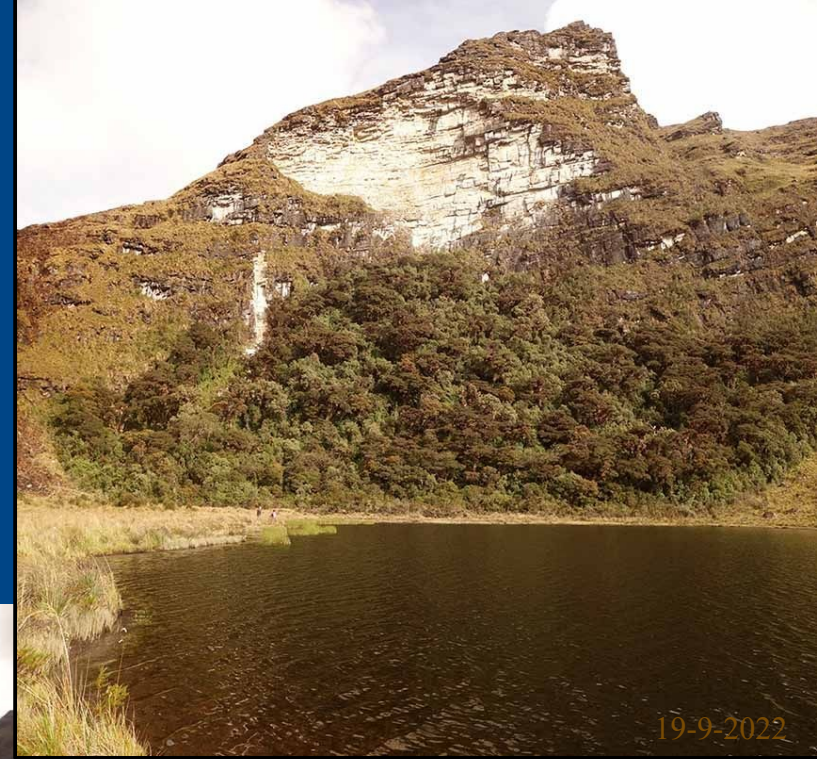


To reach Jacinto's  
thatched hut.

Crossing a pass near  
from the Laguna del Tigre.

## 37 – No fishing miraculous

The day before, Dario stretched  
a net in the Laguna del Tigre.



But no trout  
came to throw  
themselves  
there...

Dario finds  
nothing in his net.

The stream that comes out of Laguna Maria Gondolan disappears into a sinkhole.

## 38 – Back to Granada

Our goal is to reach a hut located near the Tragadero de la Laguna Maria Gondolan.

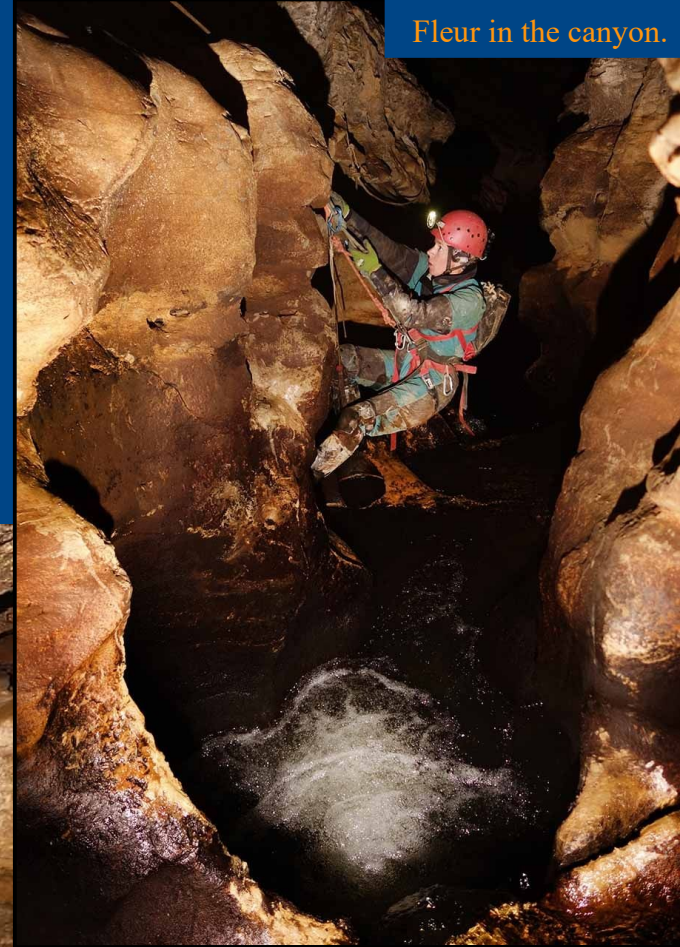


We still have to explore this sinkhole with the rest of the team who will soon join us.

The paths are never very convenient in the Puna.

## 39 – Sinkhole of the Laguna Maria Gondolan

The target is to resume exploration  
of a cave which presents a canyon  
in which a river rushes.



## 40 – The canyon

However, the passage above the canyon is not so easy to cross...



20-9-2022



Gino, with his broken ribs, seems to have forgotten about it. Tonio flies to his rescue and rescues him. The rest of the team devotes itself to a complete visit of the cave and to some photographs.

Human skeleton in the sinkhole of the Laguna Maria Gondolan.



## 41 – The team finally reunited

A new team, come from France, joined the group.



From left to right,  
Gino Staccioli,  
Raphaël Gueit,  
Pierre Bévangut,  
Jean Loup Guyot,  
Sara Guyot,  
Peter Talling,  
Fleur Loveridge,  
Carol Romero,  
Jean-Yves Bigot  
and Antonio de  
Pomar.

The group gathered in the hut  
in straw from the sinkhole of  
the Laguna Maria Gondolan.

## 42 – The canyon



The canyon  
and its pools.



More convenient overpass.

The canyon ledge equipment  
is abandoned in favor of a  
more direct overpass.

## 43 – The canyon



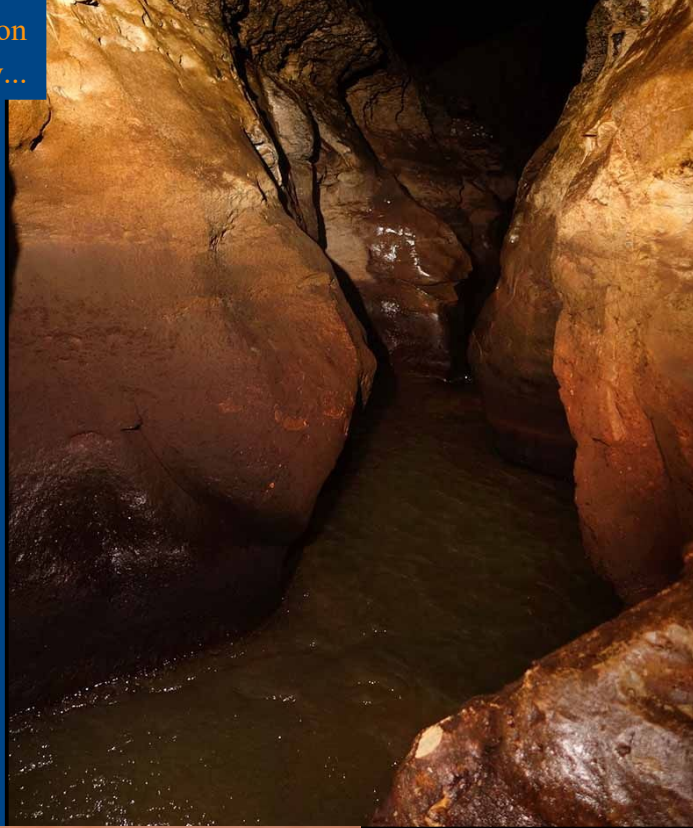
The rock, permanently watered, is extremely slippery:  
a rope is very useful.

Maneuvers on  
rocks made slippery  
by the spray of the river.

The canyon  
continue away...

## 44 – The canyon

The canyon narrows  
and it is impossible to  
avoid long technical  
equipment and tedious.  
Exploration is  
abandoned...



Too bad, because the  
great drought in the  
Andes would have  
facilitated the exploration  
of the canyon.

21-9-2022



Small river catfish aerial  
surviving in waterholes.



The riverbed  
completely dried up  
upstream of the cave.

## 45 – Exploration report

Relevé du 21 septembre 2022,  
Jean-Loup Guyot &  
Jean-Yves Bigot (GSBM)  
Disto X. Report : J.-Y. Bigot

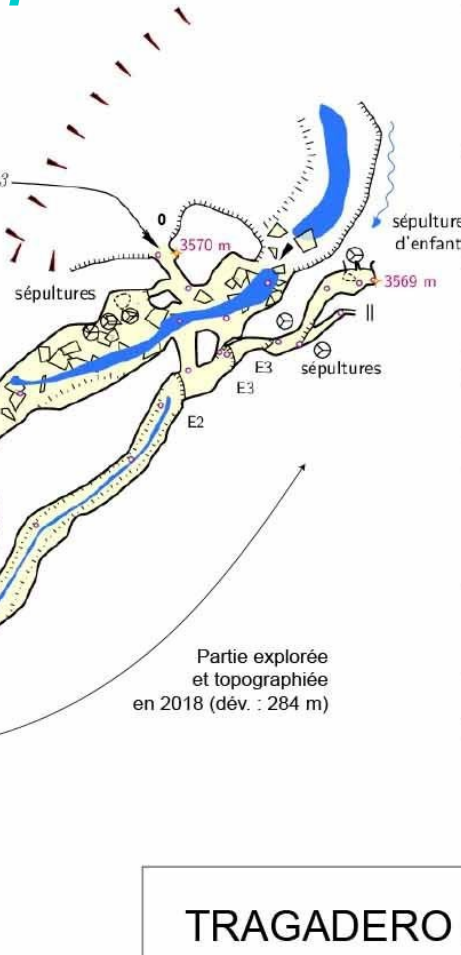
Partie topographiée en  
2022 (dév. : 48 m)

Explo 2022  
(30 m env.)

Explo 2019  
(20 m env.)

Développement (2022) : 332 m  
Dénivellation (2022) : 43 m

Lat : -6.061184  
Long : -77.592503  
Alt = 3570 m



Partie explorée  
et topographiée  
en 2018 (dév. : 284 m)

## Tragadero de las Siete Lagunas o de la Laguna Maria Gondolan

Granada, Chachapoyas, Amazonas, Perú

0 20 40 60 80 100 m

Proyección: WGS84 / UTM zone 18S  
truenorth -3.14deg

Desarrollo: 314 m

Desnivel: 33 m

Topografiado por: Patrice Baby, Jean-Yves Bigot, Liz Hidalgo, Xavier Robert  
2018

Guia(s): Dario Labajos Conila

Dibujo: Xavier Robert 2018

Club(es): Espeleo Club Andino (ECA), Groupe Spéléologique de Bagnols Marcoule  
(GSBM), Groupe Spéléologique Vulcain

Expedición: Nor Perú 2018

Compilación: Therion 5.4.2+? (compiled on 2019-01-08) el 19.01.2019

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TRAGADERO DE LA LAGUNA MARIA GONDOLAN  
Granada, Chachapoyas, Amazonas, Pérou

## 46 – Back to Granada



Dario and his team allow us to return to Granada with all our equipment.

Well-oiled logistics, managed by Dario, brings us home and his family.



Dario's mother make a poncho.

The surface is pierced by deep sinkholes.

## 47 – Toclón Karst

After a day of travel  
Granada-Soloco, we  
discover the karstic  
area of Toclón.



24-9-2022



This new field of  
exploration, quite  
remote, was offered  
to us thanks to the  
opening of a  
new track.

The group, ready to discover  
the Toclón karst (Soloco).

## 48 – Toclón 1

A first sinkhole, Toclón 1  
(Tragadero del Bosque),  
is explored by  
Raphael Gueit,  
Pierre Bévangut and  
Antonio de Pomar.



24-9-2022



While  
others  
recognize  
the bottom of  
the sinkholes  
surroundings.

The sinkhole of Toclón 2  
(Tragadero de los Bancales).



Trees evoking the  
Hobbit forests.

## 49 – A biotope particular

At over 3000 m, trees  
struggle to grow.



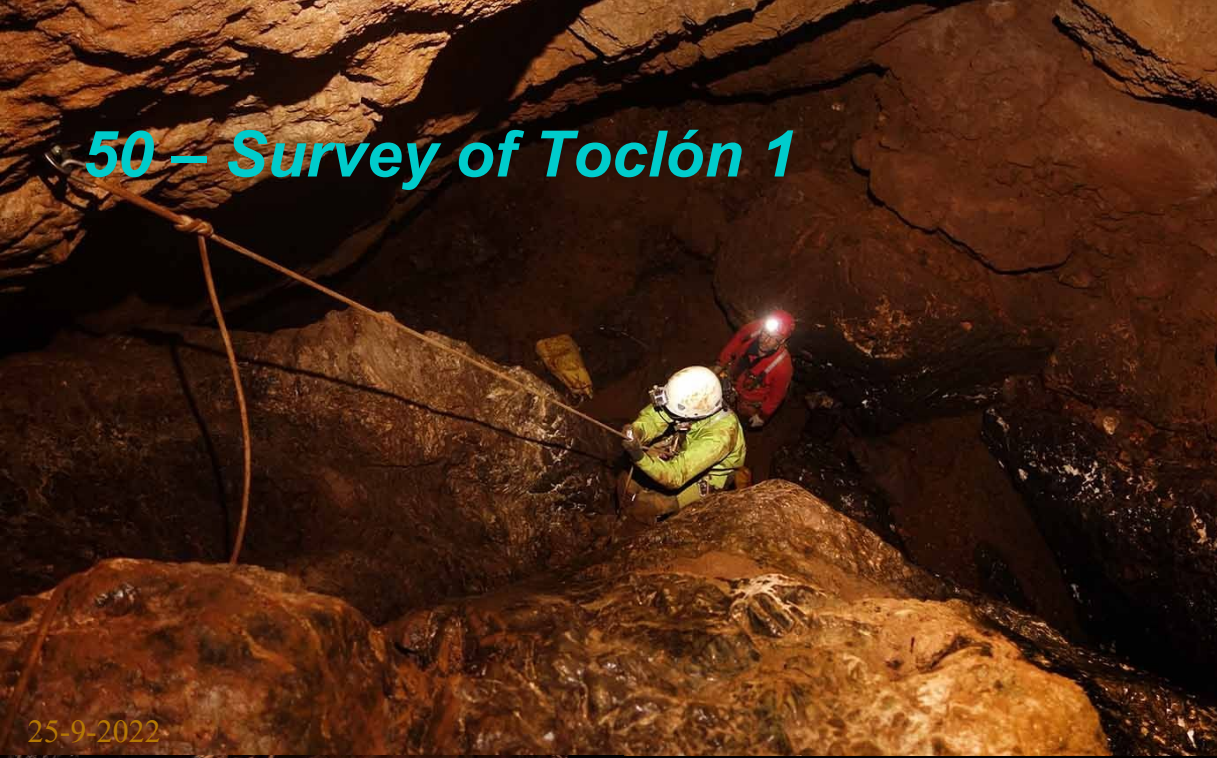
24-9-2022

"Maraz" Skull  
found in a small cave.



This particular biotope is a good  
refuge for the "Mountain Paca"  
(*Cuniculus taczanowskii*), a  
specific "maráz" of the Andes.

## 50 – Survey of Toclón 1

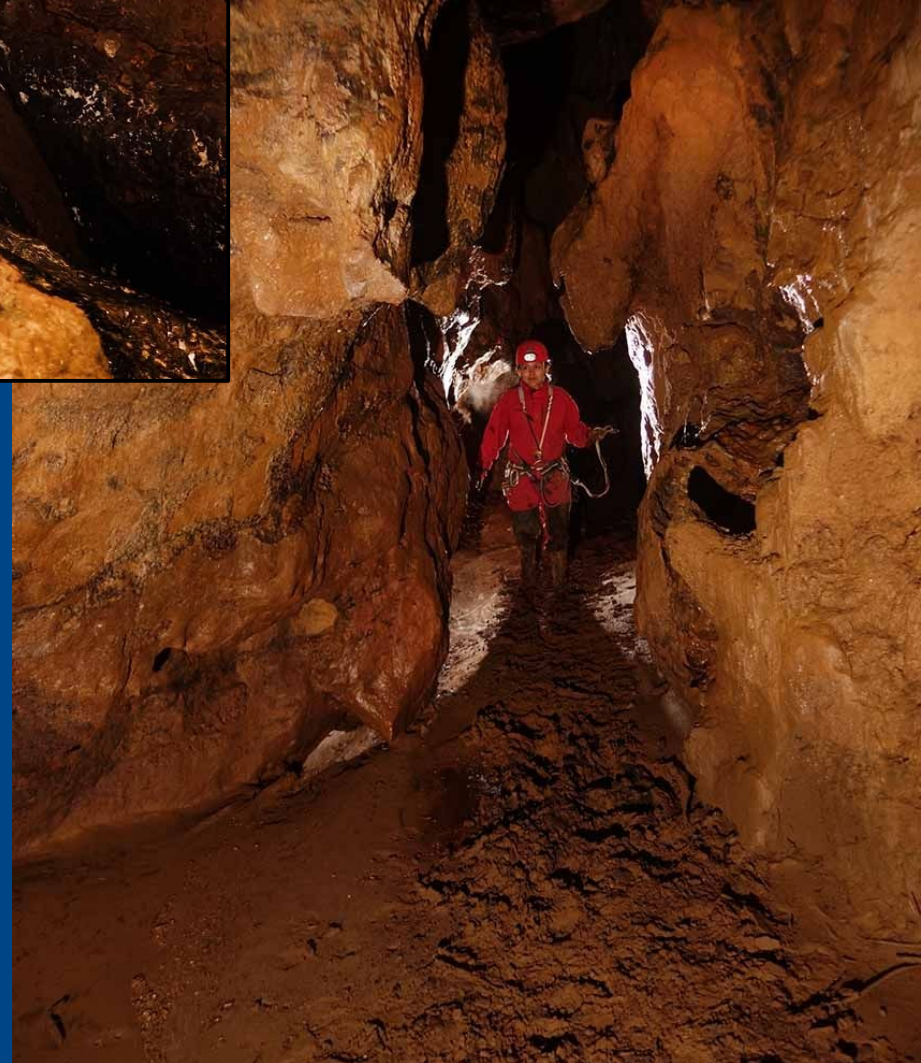


25-9-2022

The day is dedicated to the survey of Toclón 1, while another team explores the Toclón 2 sinkhole.



Shafts and galleries from the Toclón 1 sinkhole (Tragadero del Bosque).



## 51 – Survey of Toclón 2

The caves discovered are only a hundred meters long, but they must be surveyed.

Nice gallery without continuation.



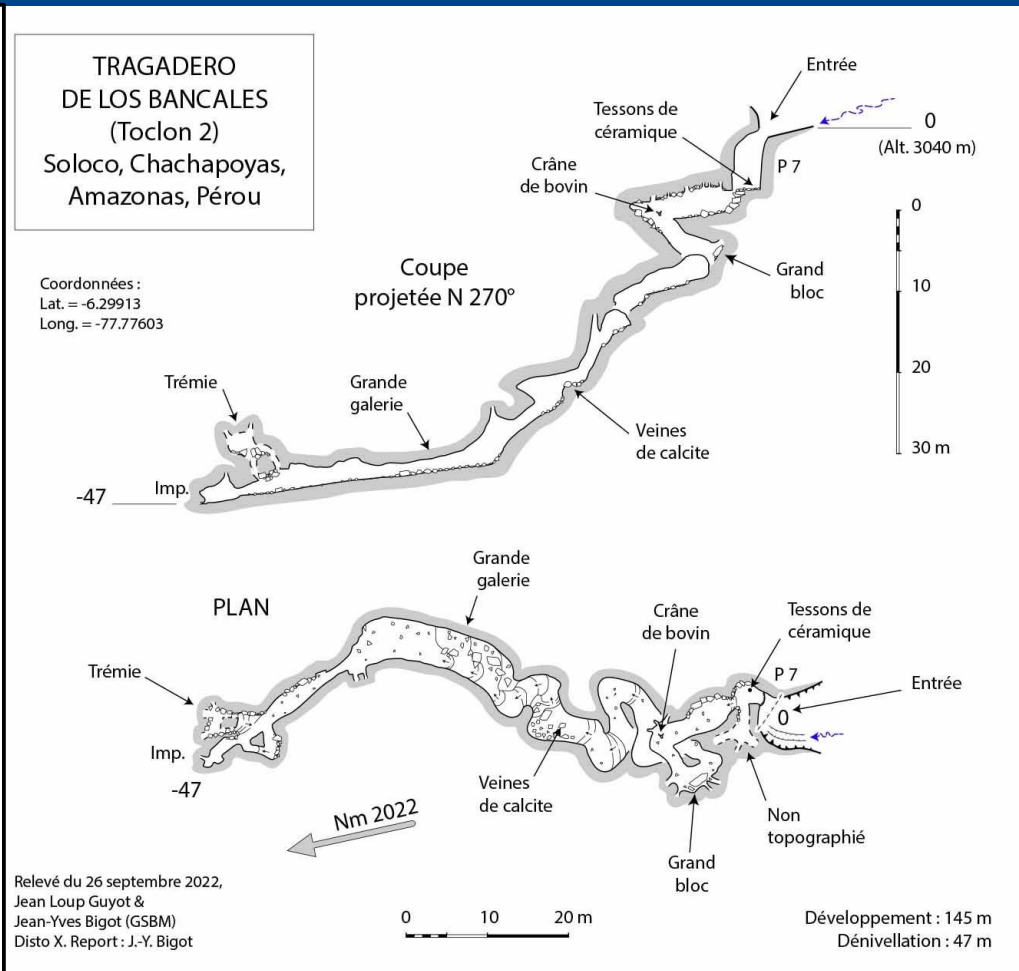
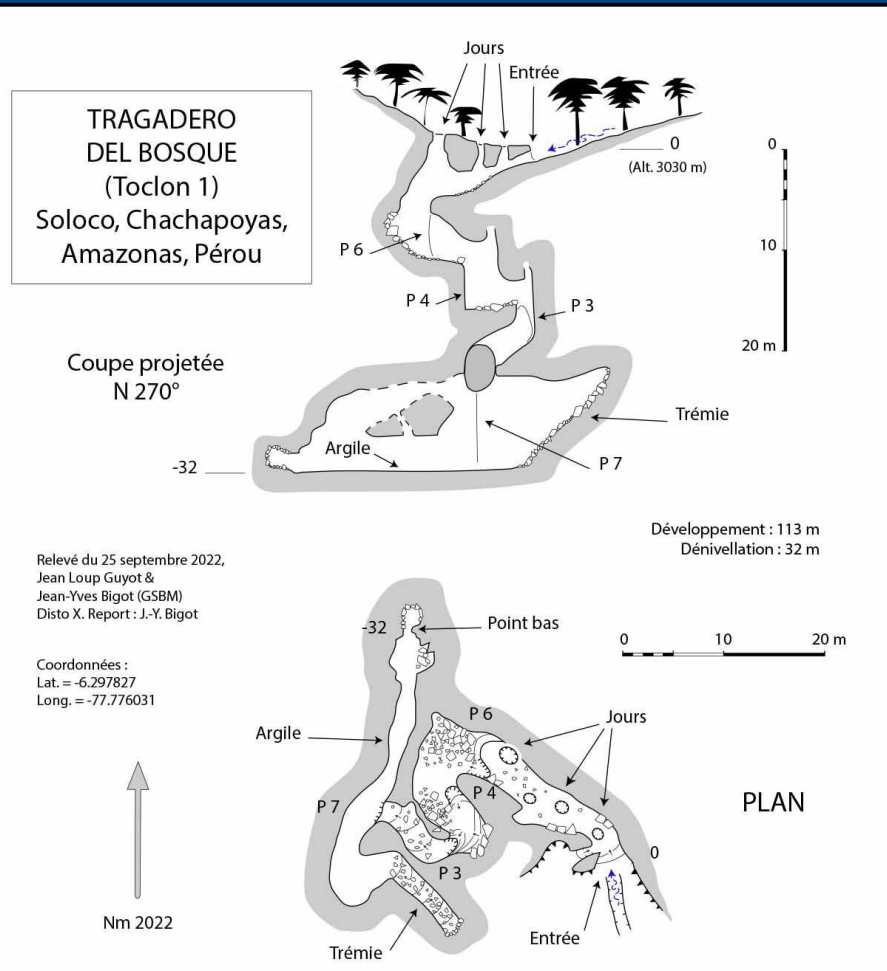
Ascent from the entrance shaft from Toclón 2 (Tragadero de los Bancales).

26-9-2022

# 52 – Surveys of Toclón 1 and 2

The caves are modest, but we hope to do better in other caves.

## Surveys of Toclón 1 and 2.



## 53 – Exploration of Toclón 3

A deep sinkhole provides  
access to a third sinkhole  
(Toclón 3) which requires  
an unblocking.

The successful clearing  
at the top of a 12 m shaft.



26-9-2022



Access to Toclón 3.

The interest of  
this cave is that  
it continues...

# 54 – Survey of Toclón 3



Toclón 3



Vast Toclón 3 sinkhole.

The sinkhole of Toclón 3 drains a huge sinkhole  
that gives good hope of continuation.

Interior of the Toclón 3 sinkhole  
(Tragadero de Toclón).

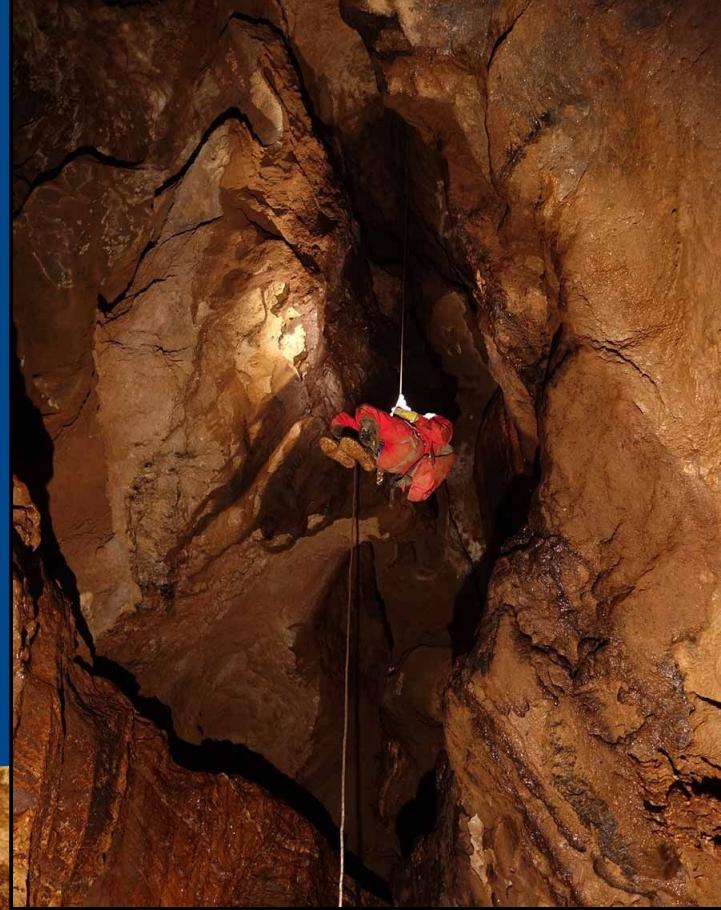


27-9-2022

## 55 – Survey of Toclón 3

The topography of Toclón 3 is made.  
A shaft of 5 m is equipped  
("The Bath"), but very  
quickly the team is stopped in  
front an wetted roof (almost sump)  
swept by a strong current of air...

Nice gallery of Toclón 3.



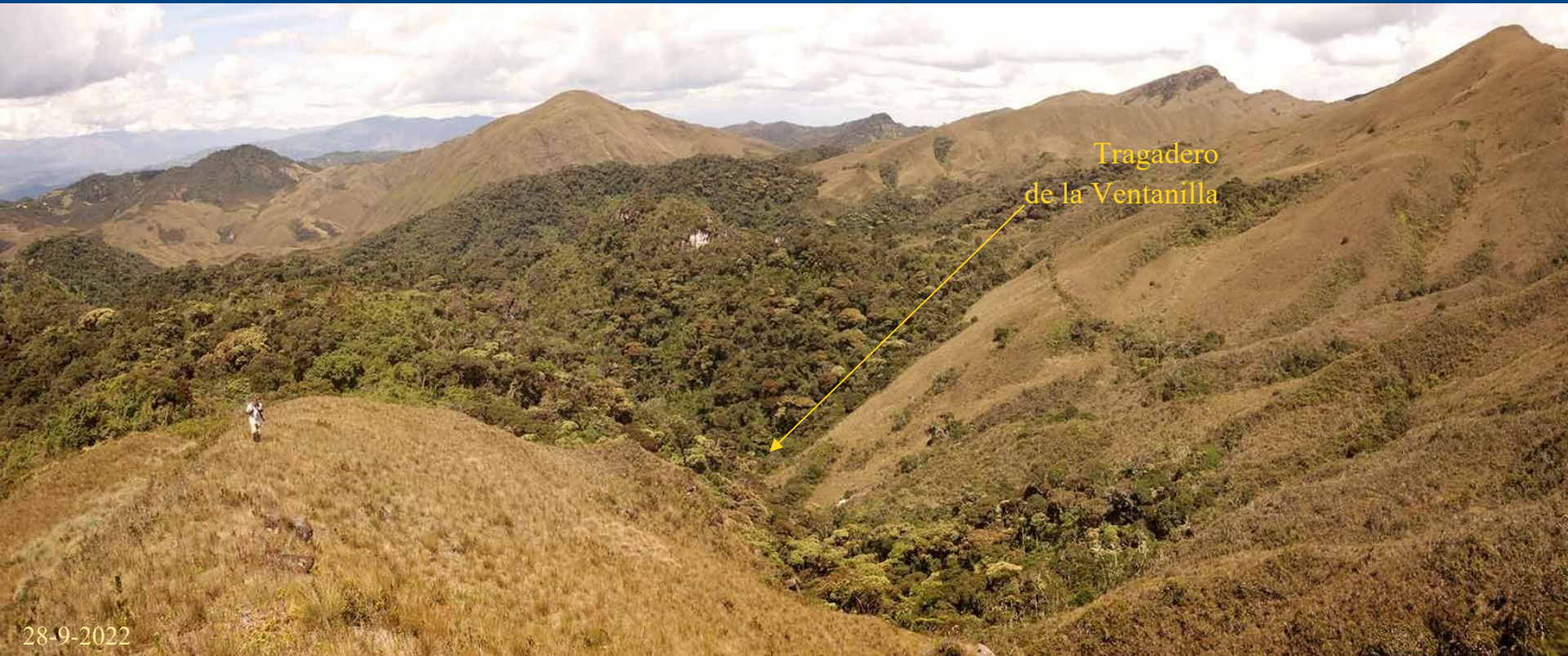
Shaft of 17 m.



The rest of the  
team went to  
recognize other  
sinkholes in the  
Toclón sector.

## 56 – La Ventanilla

For Gino Stacciolo, Olivier Fabre and Jean-Yves Bigot, the goal is recognition sinkholes located at the sandstone-limestone boundary, where the rivers disappear into the karst. We were shown "paths" in the Ventanilla sector...



Tragadero  
de la Ventanilla

28-9-2022

But, no way! We prefer to circumvent the forest by the sandstone mountains located at high altitude, where the view is superb.

The Ventanilla sinkhole  
is at the very bottom...



## 57 – La Ventanilla

The route is long; and the team fails to reach the sinkhole, whose entrance is blocked by a lake.

All come back at night around 8 p.m. in the car, thanks to Jean-Yves' GPS.



28-9-2022

No path provides access at the Ventanilla sinkhole.



Sandstone slope over which the river flows.



Lake blocking access to the Ventanilla sinkhole.

« The Bath » is well equipped.

## 58 – The wetted roof

Descent into Toclón 3 for Pierre Bévengut, Jean Loup Guyot, Antonio de Pomar and Raphael Gueit. Tonio and Raphaël pass the wetted roof and discover an underground river.



28-9-2022



Despite the cold water, Raphaël swims across a lake, and it continues!

The wetted roof requires to get completely wet.

## 59 – Chachapoyas

We are very well settled in Soloco in a private garden where all amenities are close at hand.



The camp of Soloco.

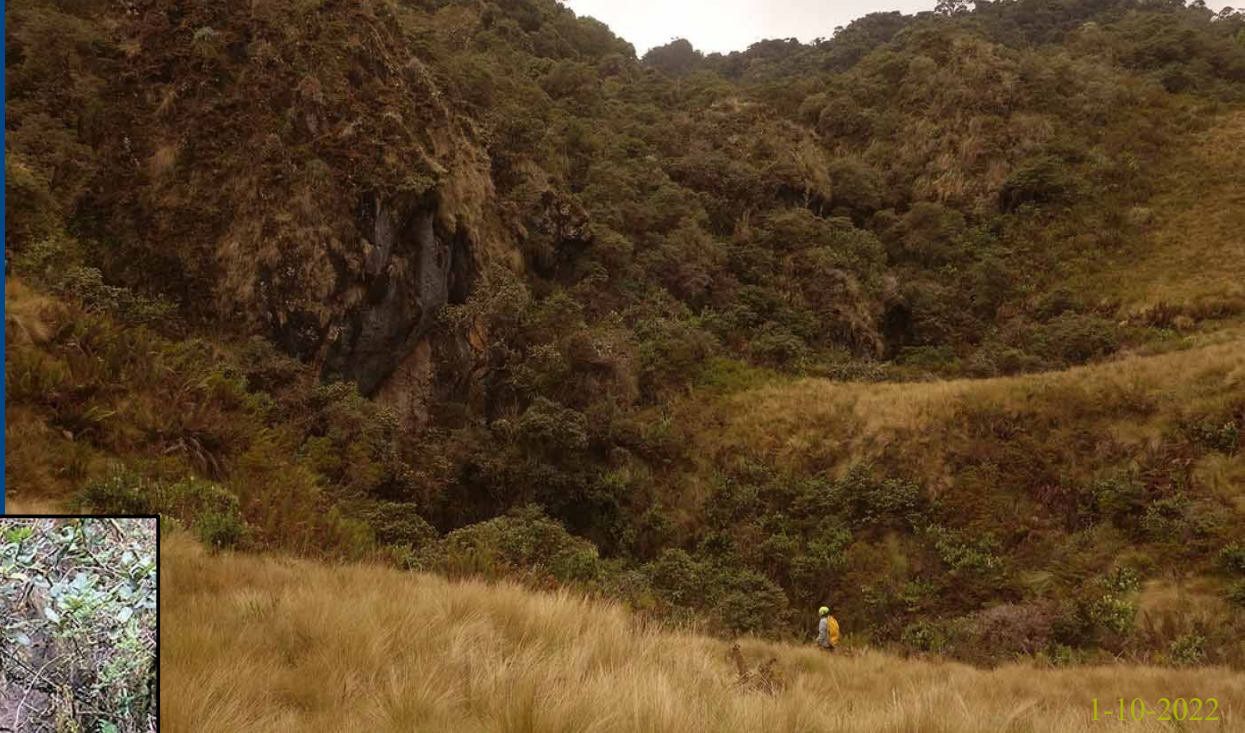


But the entertainment and businesses of the village cannot compete with those of Chachapoyas. A day in town is justified by refueling.

Gathering in front of the Chachapoyas Cathedral.

## 60 – New surveys

After a whole day of rain,  
new reconnaissance  
are scheduled.



The Toclón 6 sinkhole (Tragadero del Temor).

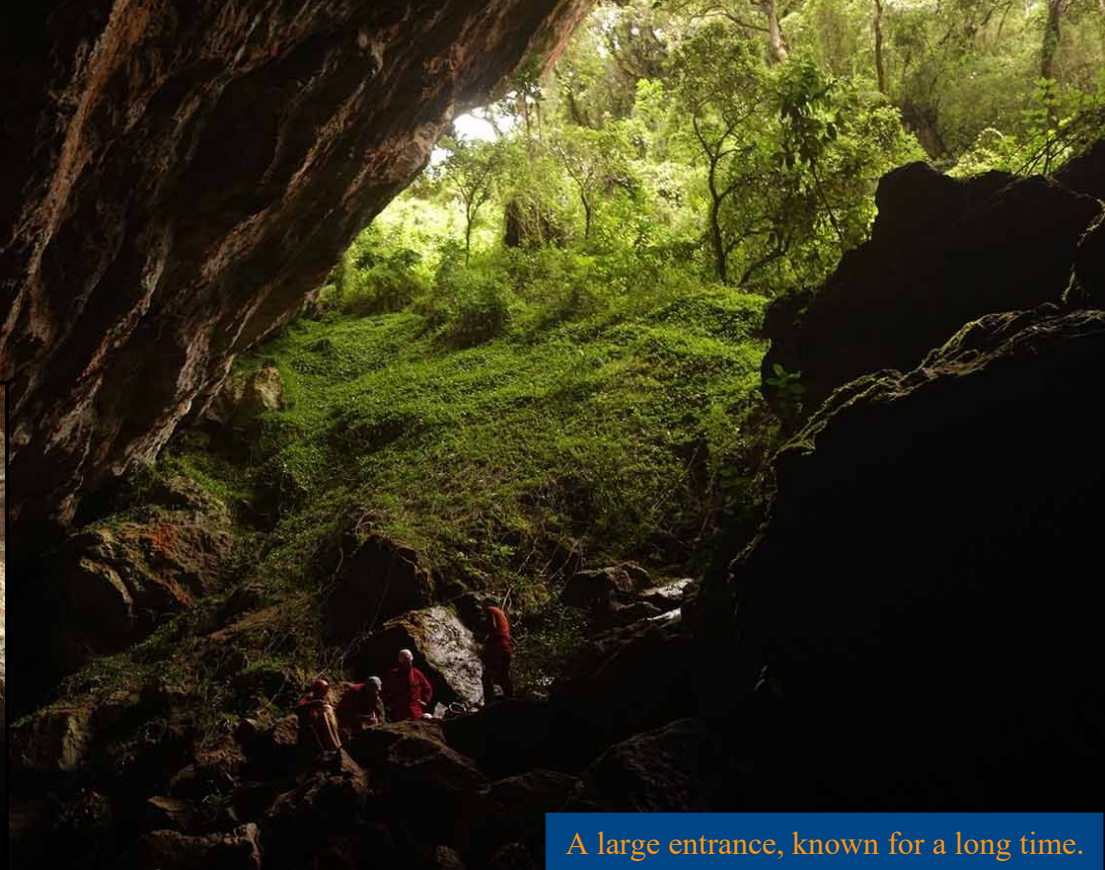
A team opens a path with a machete and reaches  
the entrance to the Tragadero de la Ventanilla.

Another team prospected west of Toclón 3 and  
discovered four new possible cave entrances:  
Toclón 4, 5, 6, and 7.

The site of Toclón 5  
(Tragadero del Canyon)

2-10-2022

## 61 – Tragadero de la Ventanilla



A large entrance, known for a long time.

In the vast entrance of the Tragadero de la Ventanilla, we lose quickly the course of the river.

The cave was frequented by guacharos (*Steatornis caripensis*) and men who built walls and terraces.

Bottom left, a wall supporting a built terrace.

## 62 – Tragadero de la Ventanilla



In the past, the gallery and the room of the Blue Pebbles were regularly flooded.

Blue Pebbles room.

## 63 – Tragadero de la Ventanilla

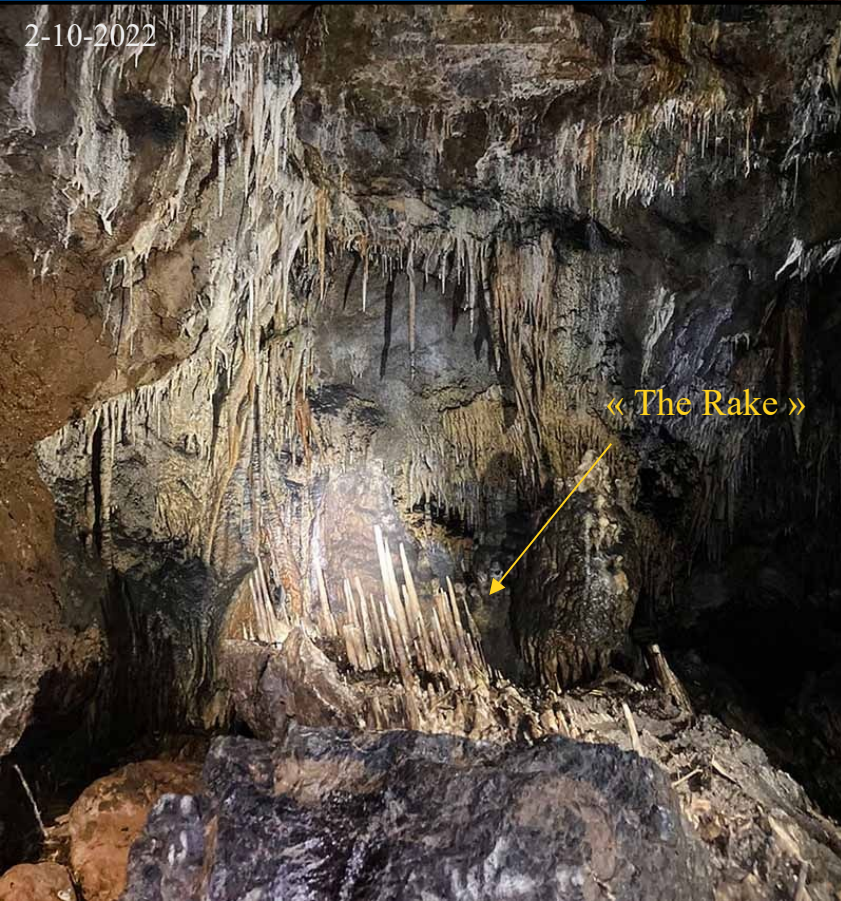
Subsequently, the cave suffered some erosion of its fillings.



Terrain section showing the fillings of the Blue Pebbles room.

Fillings and speleothems have been reworked by underground circulations.

The "Rake", a block of stalactites that turned over, trapped plant debris brought by the river.



« The Rake »

## 64 – Tragadero de la Ventanilla

The gallery of the Rocky Bridge once carried a few tree trunks that are now decomposing.

A team, made up of Raphaël, Sara and Tonio went to explore Toclón 6.



3-10-2022



At the same time, the exploration of the Tragadero de la Ventanilla continues.

An explo-surveyed team, composed of Pierre, Jean Loup and Jean-Yves, is in charge of the operation.

Pierre uses the drill to install anchors.



# 65 – Tragadero de la Ventanilla



The "candle" in the middle of the gallery.



A 10 m shaft provides access at the Candle Gallery. Below, a stream makes his appearance, but gets lost immediately into a pool.

The bottom of the shaft is covered with sand.

## 66 – Tragadero de la Ventanilla



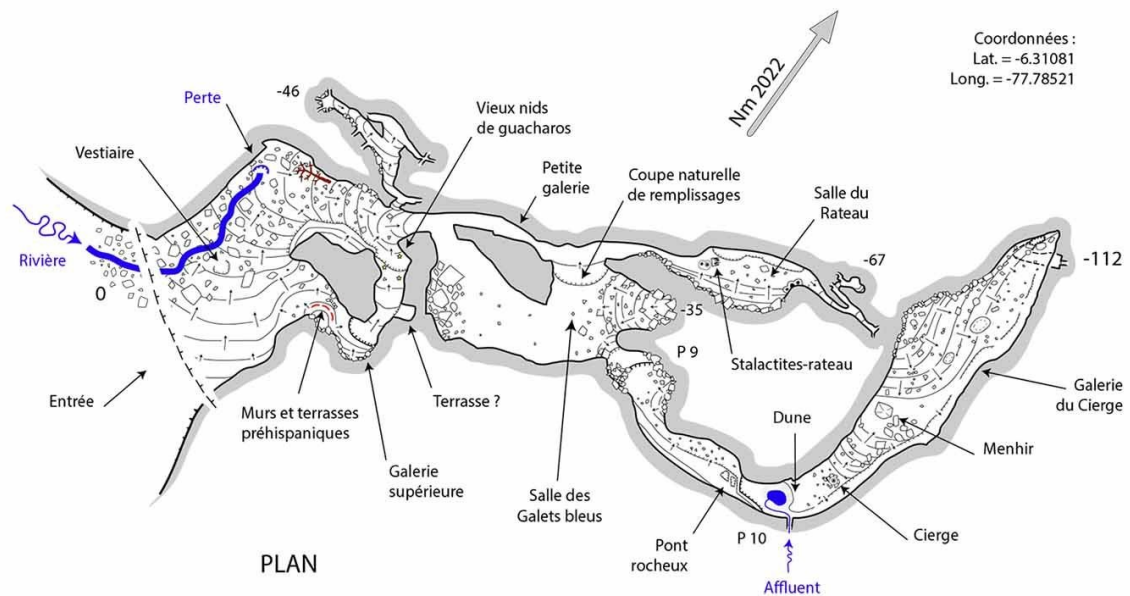
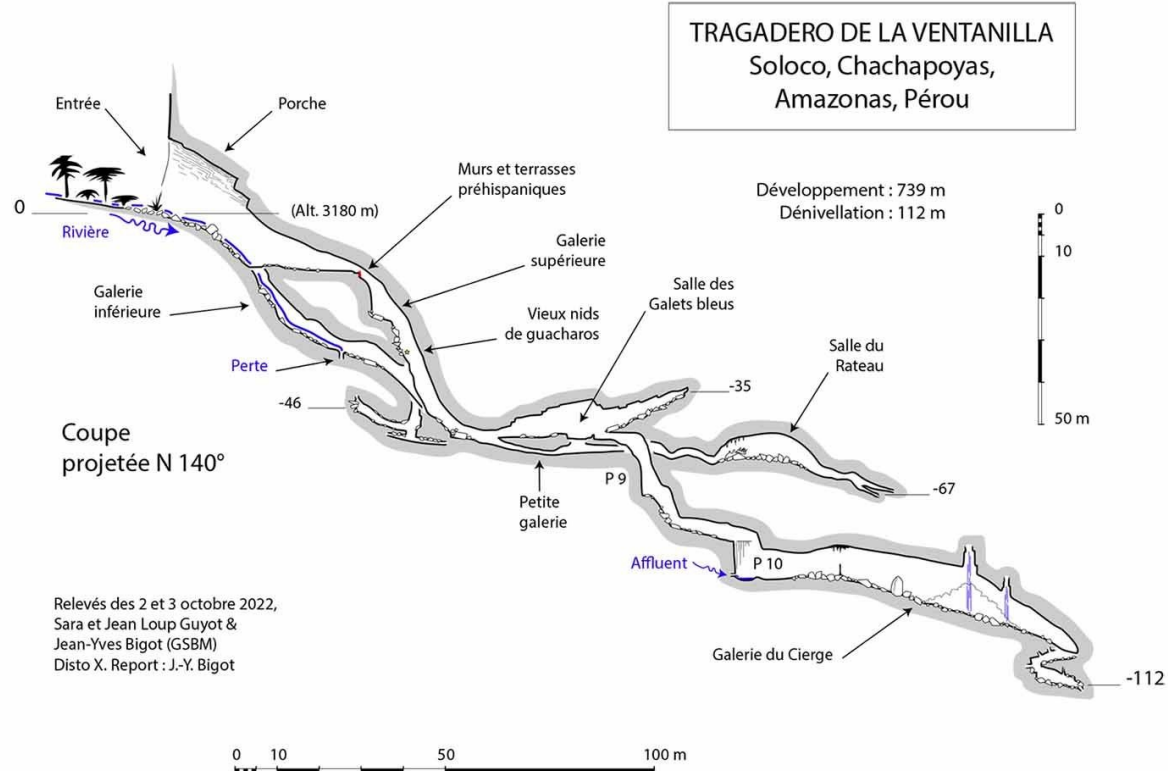
The Candle Gallery.

The gallery of the Candle is vast, but without continuation.  
The air current is lost in a chaos of blocks at -112 m.

# 67 – Tragadero de la Ventanilla

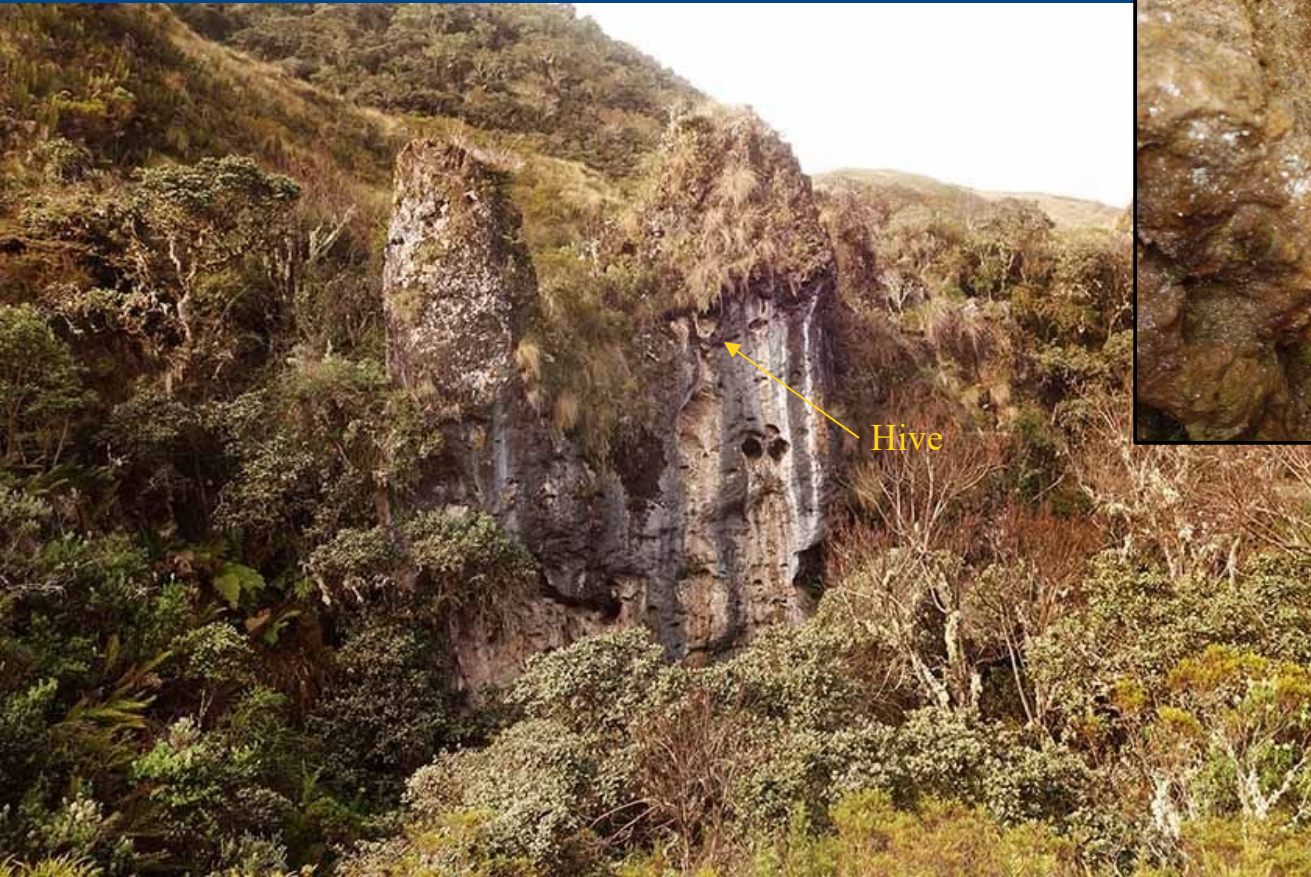
This cave, located upstream of the explored systems, didn't lead us to an underground river; but its galleries are 739 m long and 112 m deep.

Survey of  
Tragadero de la Ventanilla.



## 68 – *Toclón 4 exploration*

Exploration of Toclón 4 has begun.  
Above us the hum of bees indicates that  
a hive is located at the top of a pinnacle.



At the foot of the  
pinnacle, the entrance  
shaft opens (P14).

The pinnacle where the hive of Toclón 4  
is located (Tragadero de la Colmena).

## 69 – Toclón 4 exploration

The junction with the  
tributary of the Pillar  
(Toclón 3) is made.



The team at -130 m in Toclón 4  
(Tragadero de la Colmena).

During the descent,  
suspended galleries were  
spotted in the walls of the  
Accident room.

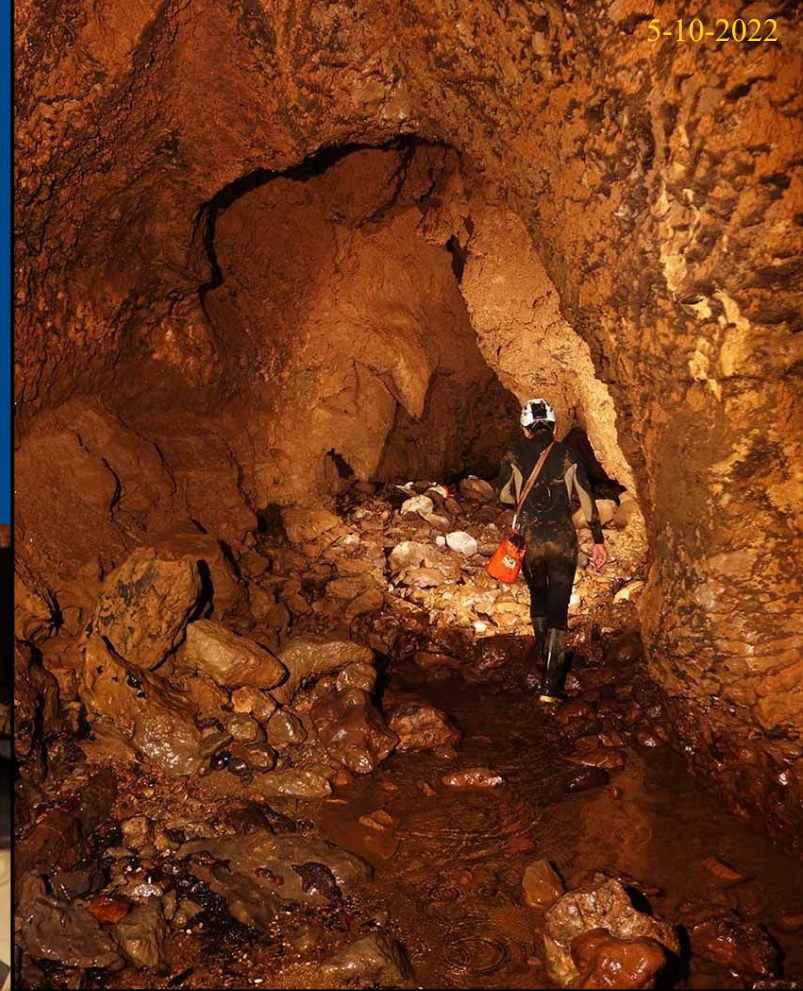
You will have to come back  
to complete the exploration  
of the "Toclón System" (T3  
& T4 sinkholes).



Galleries  
suspended  
to explore.

## 70 – Toclón 4 exploration

Two teams (exploration and survey) are deployed in Toclón 4. That, composed of Jean Loup, Pierre, Olivier and Raphaël, continues to explore the upstream parts.



The one at the back, composed of Tonio and Jean-Yves, must pass the wetted roof.

The wetting roof  
view from the other side.

## 71 – Toclón 4 exploration



The downstream collector.

After digging the ground to try to lower the level of the wetted roof, the team recognizes the downstream part of the collector until a chaos of blocks.

The downstream part at -178 m, just before the chaos of blocks.

# 72 – Toclón 4 exploration



The "Lake of the Islands" (upstream part).



Of course, the topography is partly made, but everything remains to be explored...



## 73 – Toclón 4 exploration

The descent into the blocks of Toclón 4  
is quite exposed without a rope.  
A hold remains in Gino's hand, who  
finds himself in a very bad position...

6-10-2022



For the third time,  
Tonio his guardian  
angel prevents him  
from falling into  
the void !

Suspended galleries of Toclón 4  
(Tragadero de la Colmena).

# 74 – Continuation and end of Toclón 4 exploration



The Block room.



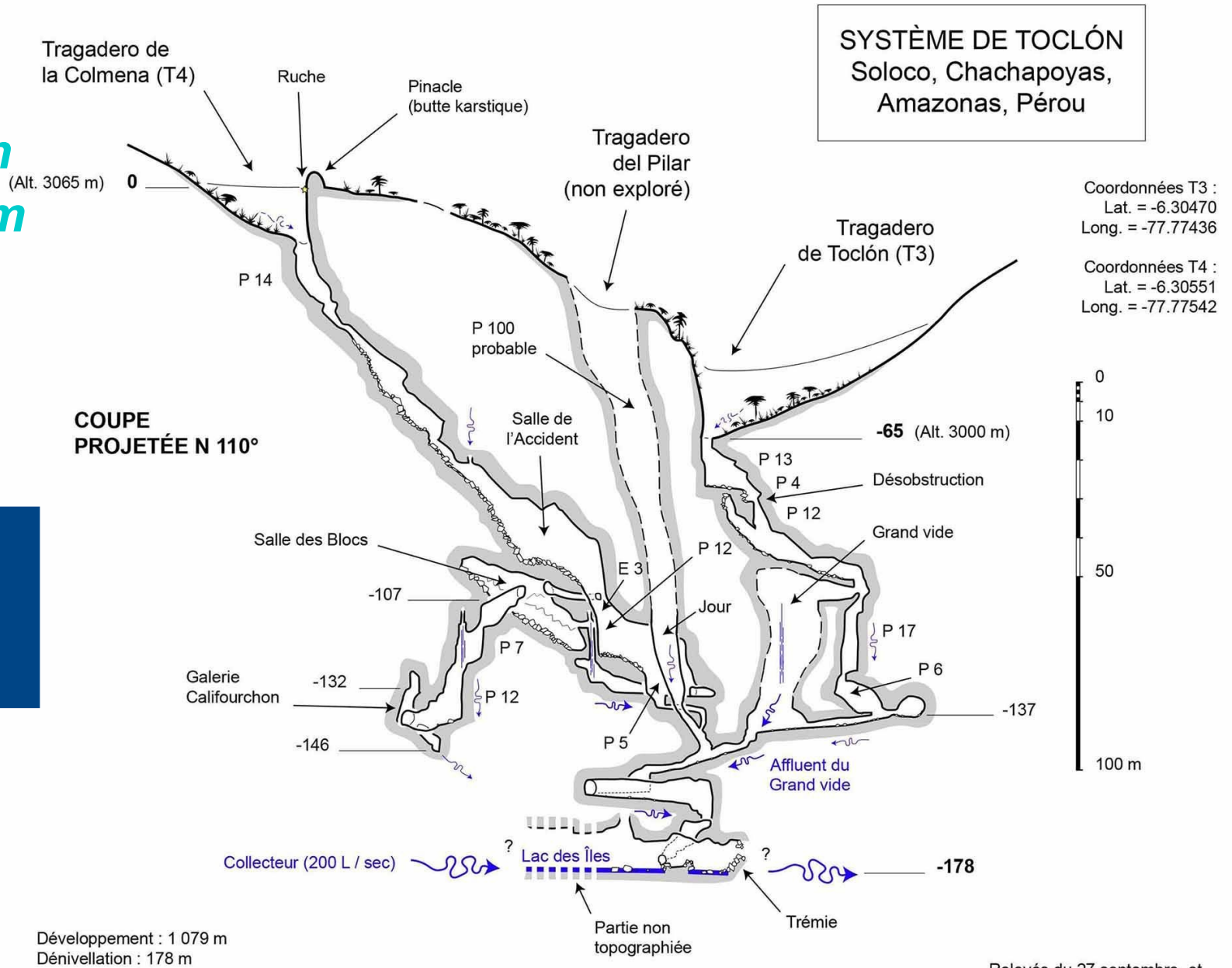
The exploration focuses on the Califourchon gallery and on a watered shaft which emerges at the top of the Pillar tributary.

The Toclón system reaches 1,079 m long and 178 m deep.

Equipment of a watered shaft in the bathroom Blocks (Tragadero de la Colmena).

# 75 – Toclón System

## Survey of the Toclón System (T3 & T4).

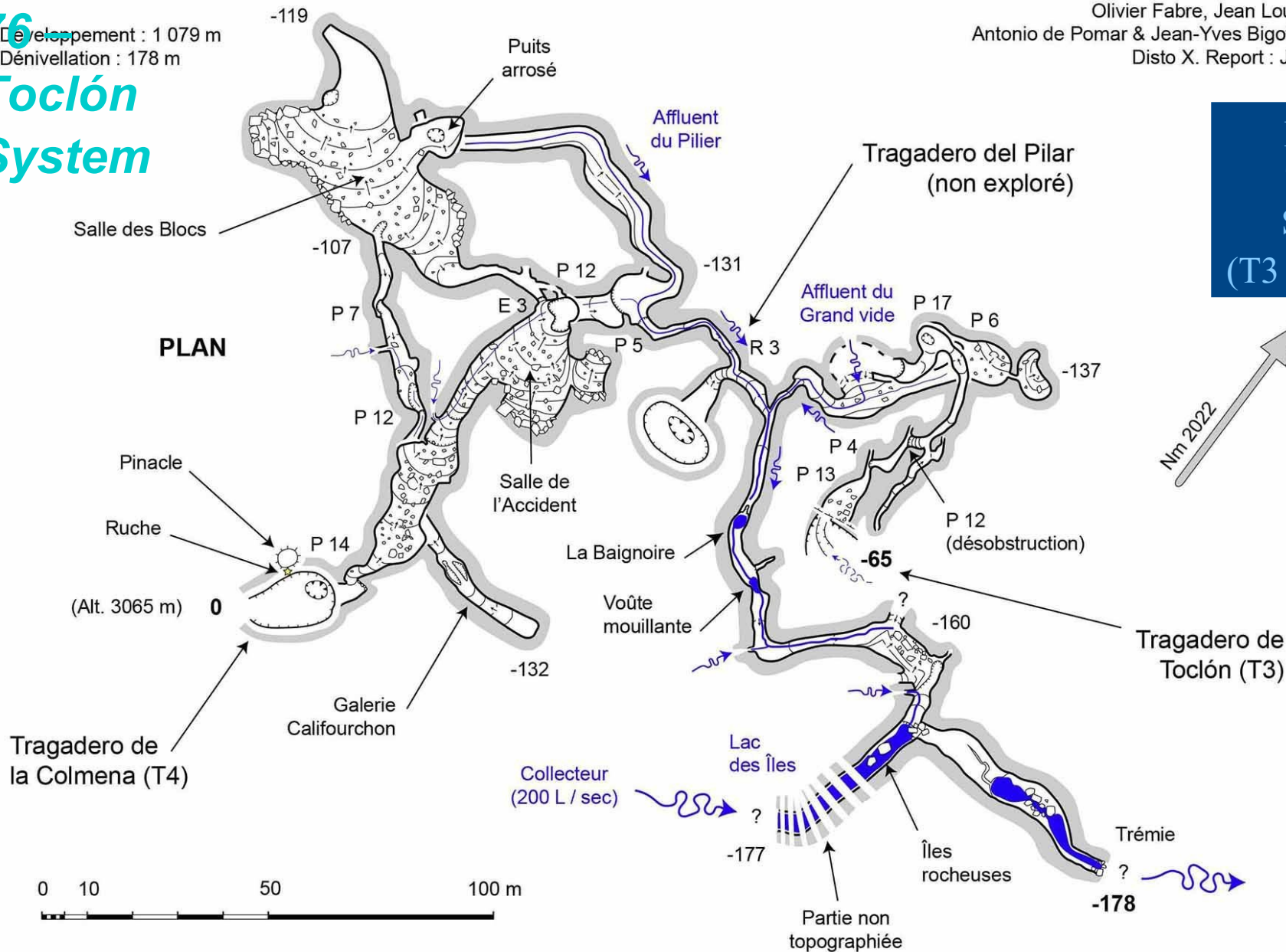


# 76 Toclón System

Le développement : 1 079 m  
Dénivellation : 178 m

Relevés du 27 septembre et  
des 4, 5 et 6 octobre 2022,  
Olivier Fabre, Jean Loup Guyot,  
Antonio de Pomar & Jean-Yves Bigot (GSBM)  
Disto X. Report : J.-Y. Bigot

Plan of  
Toclón  
System  
(T3 & T4).



## 77 – The hydrological system Ventanilla - Toclón



The report of the caves on the *Goggle earth* map indicates possible connections between the different systems.

Map of Tragaderos de la Ventanilla and Toclón (3 and 4).

## 78 – Toclón 6 exploration

In recent days, the works on the path have bothered us a lot.



Toclón 6 entrance  
(Tragadero del Timor).

7-10-2022



Tomorrow, the track will be cut off and we won't be able to pass. It was high time to unequip the last caves, especially that of Toclón 6... Stop on nothing but this vertical cave is not so easy.

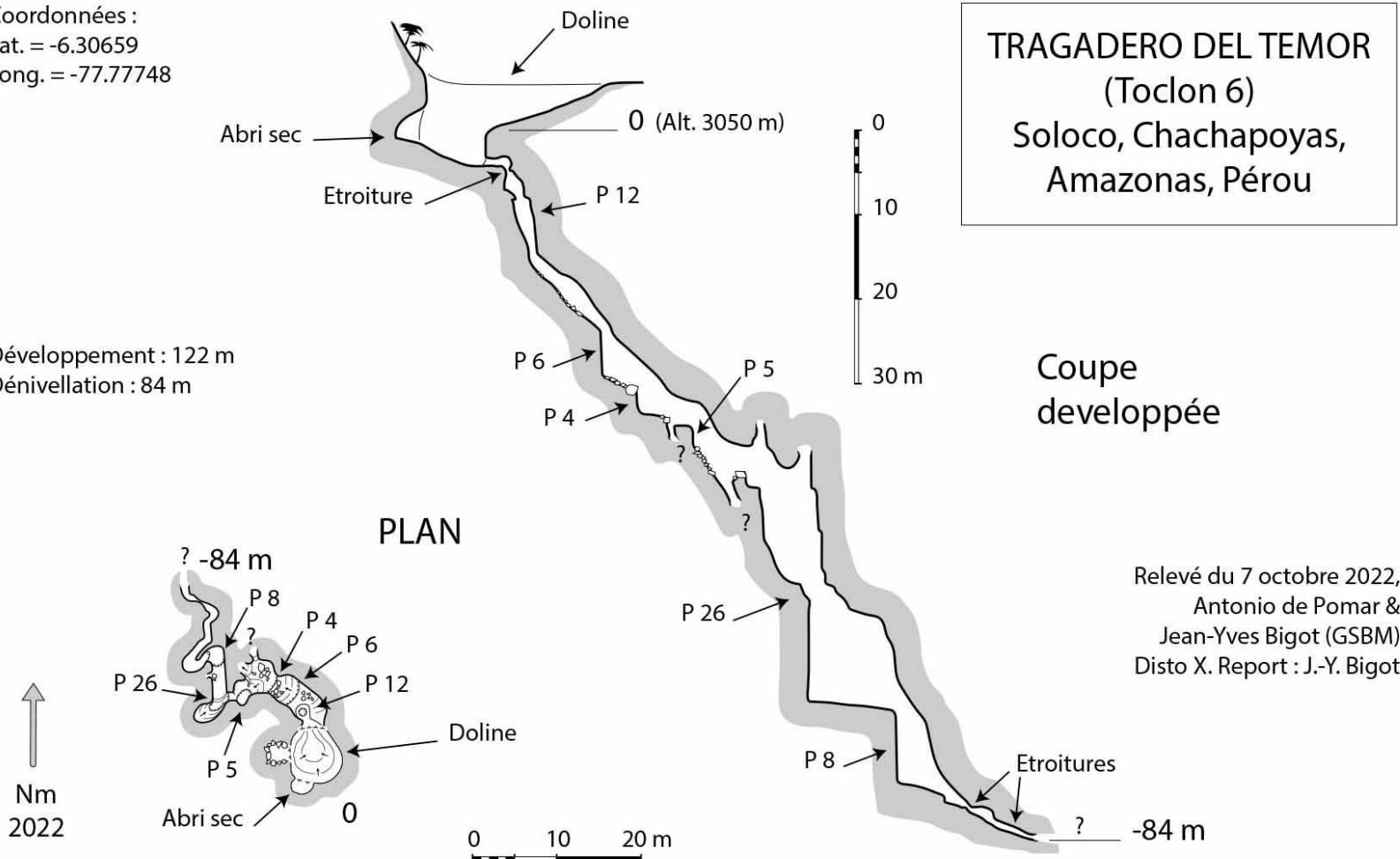
Summit of P4 shaft.

# 79 – Toclón 6 exploration

Survey of  
Tragadero de Toclón 6  
(Tragadero del Temor).

Coordonnées :  
Lat. = -6.30659  
Long. = -77.77748

Développement : 122 m  
Dénivellation : 84 m



7-10-2022

## 80 – Good bye Soloco



Part of the group, along with people from Soloco and Mito.



For her birthday Sara wanted to mark the occasion and prepare a festive meal, with duck on the menu.

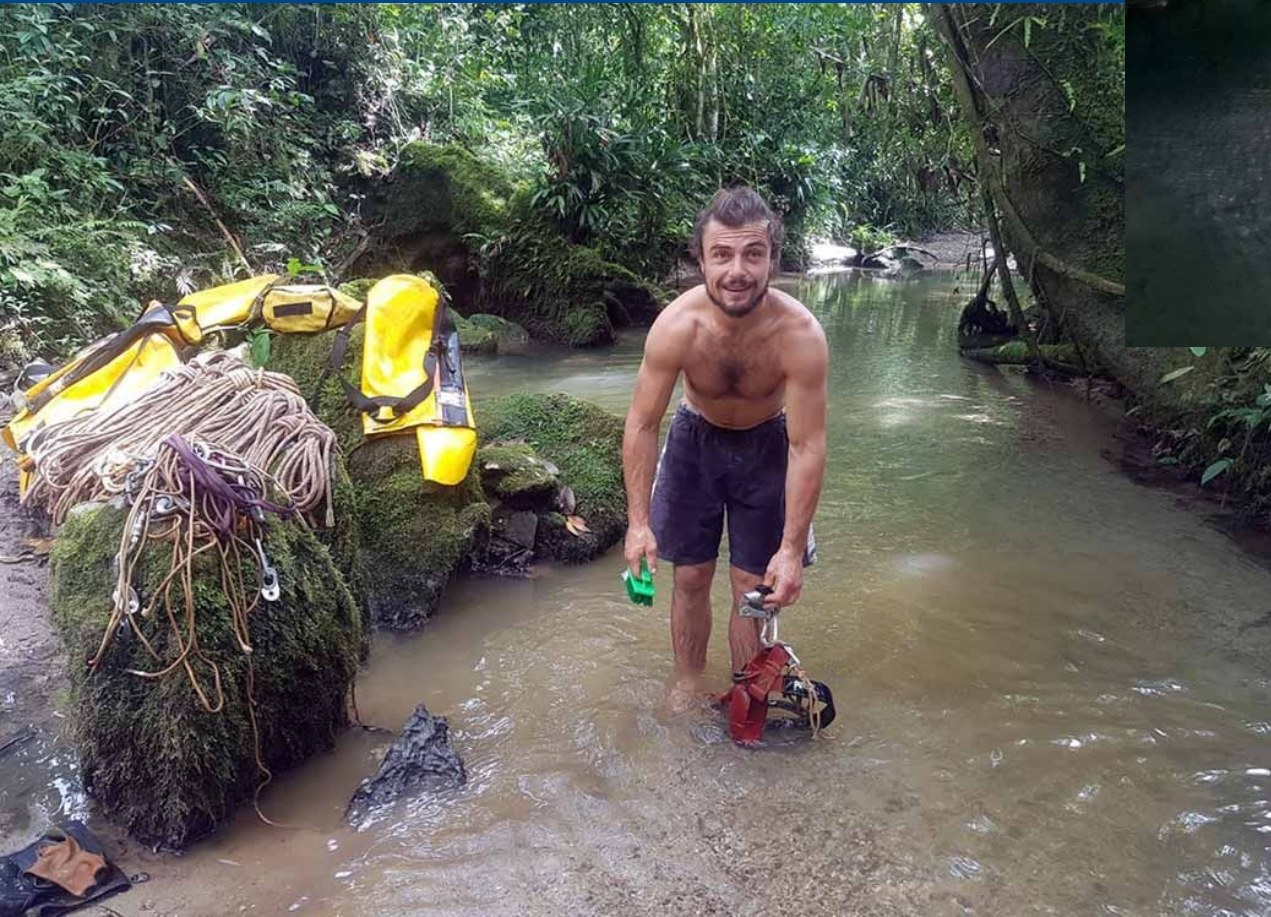
A bird, very well cooked, embellished of potatoes that Sara has been looking for herself in the Mito Mountains.

Sara and Gino in the kitchen.



## 81 – Palestina Camp

After thorough cleaning of the material, part of the team visit the Palestina Cave



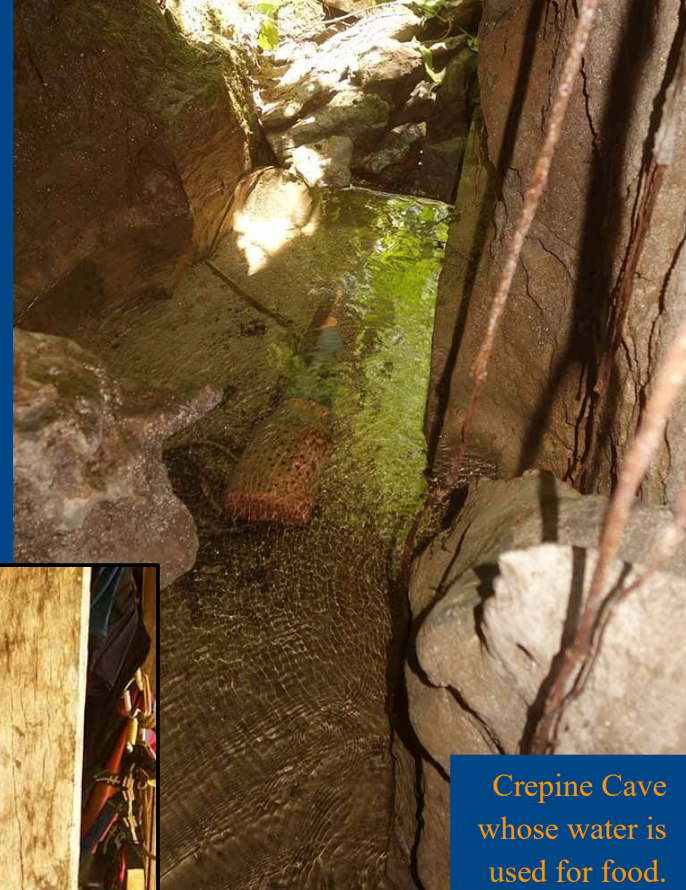
The cables just before that they don't break.

During the visit, the two steel cables, installed 10 years ago, will break one after the other...

Raphaël cleaning the equipment in the Rio Jordan, Cueva de Palestina.

## 82 – Palestina Camp

Searching for caves around the camp we leads back to the entrance of already known caves, as the spring used by Lazaro for the water supply of his house.



Crepine Cave  
whose water is  
used for food.



Prospecting  
in the jungle under  
a blazing sun does  
not work for us,  
the heat ended up  
killing everyone.

Palestina Camp  
after intense action.

# 83 – Palestina Camp



Patrice Baby joined the group with Tarapoto cigars in his luggage.

An evening at the Palestinian camp.

## 84 – Santa Cruz



Santa Cruz Village.

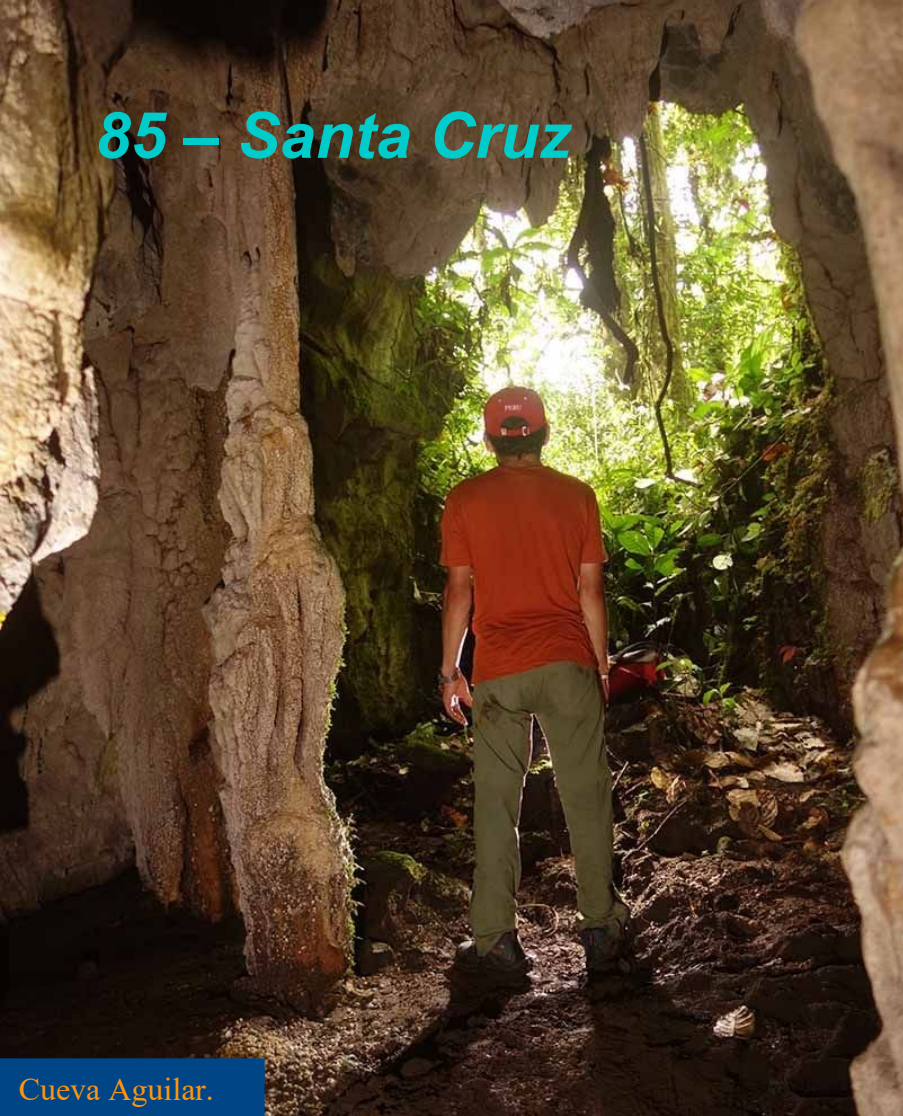
The search for an enigmatic cave leads us to Santa Cruz, near Santa Rosa del Mirador. Despite careful research (GPS), beyond the "Puente" site, already visited without success in 2019, the cave remains untraceable... In fact, it's an error in the coordinates of another cave: the Cueva de Tishuca!



11-10-2022

The Puente site.

## 85 – Santa Cruz



Cueva Aguilar.

We spot the Arco and Satanas sinkhole, as well as a small cave, the Cueva Aguilar, that Miguel discovered while exploring the forest paths during the lockdown.

We find an honest and friendly guide in Santa Cruz: Miguel Aguilar. He shows us the way through the forest following difficult paths and abandoned by the madereros (loggers).

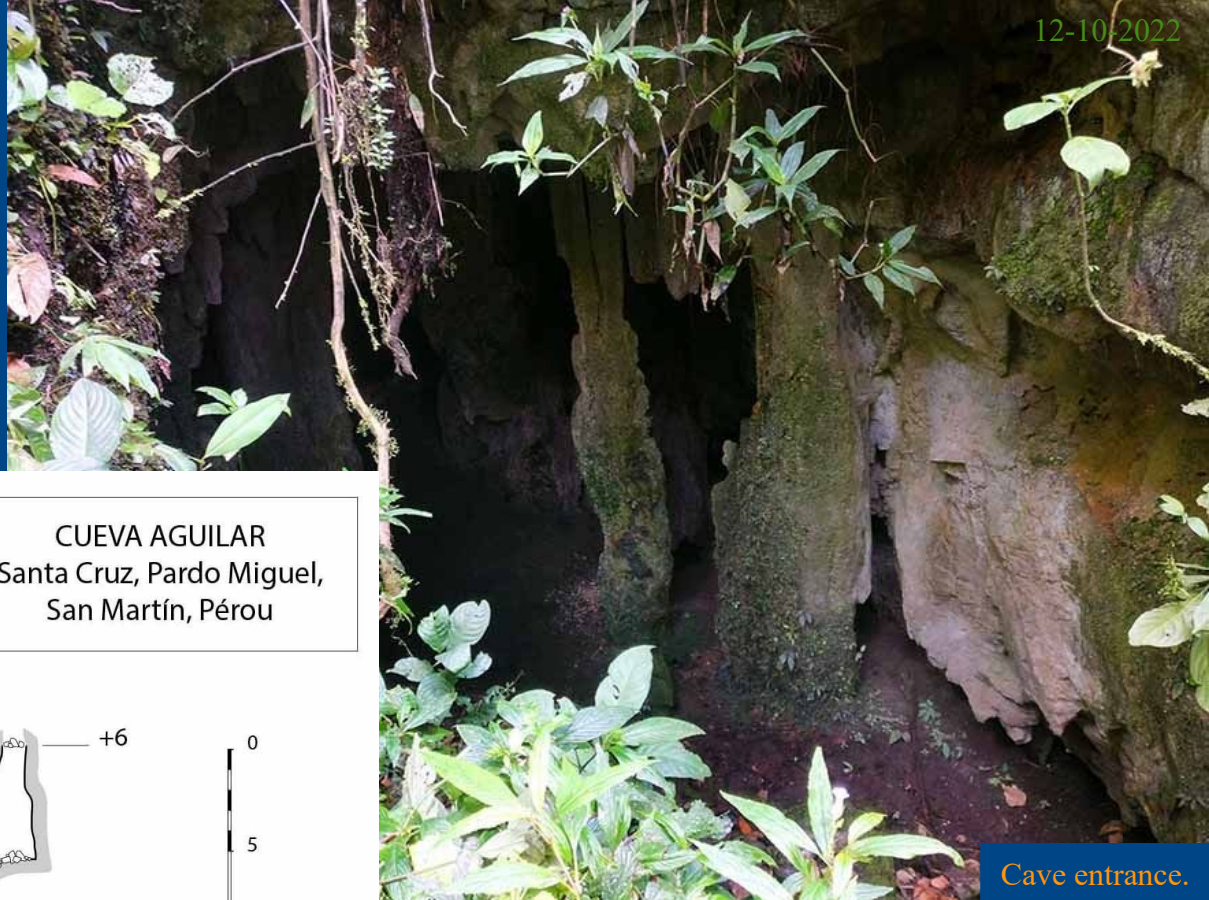


12-10-2022

Tragadero del Arco.

# 86 – Santa Cruz

Of course, the cave is modest,  
but the guide responded in  
accordance with our request.

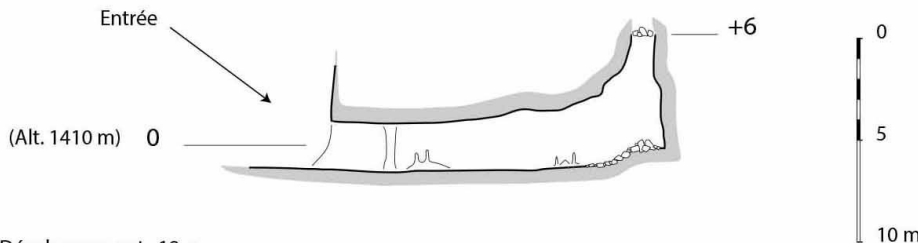


Cave entrance.

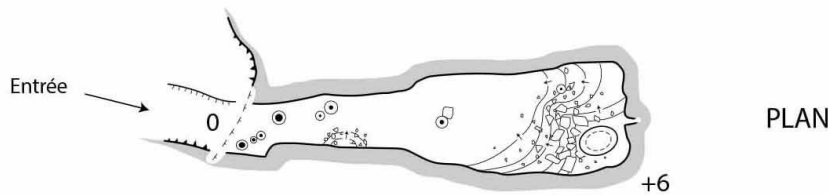
Coordonnées :  
Lat. = -5.76652  
Long. = -77.56727

CUEVA AGUILAR  
Santa Cruz, Pardo Miguel,  
San Martín, Pérou

Coupe  
projetée N 266°

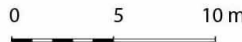


Développement : 19 m  
Dénivellation : 6 m



Relevé du 12 octobre 2022,  
Antonio de Pomar &  
Jean-Yves Bigot (GSBM)  
Disto X. Report : J.-Y. Bigot

Nm 2022



He omitted to tell us that  
he also knew deep shafts,  
because we did not ask  
him explicitly...

Survey of  
Cueva Aguilar.

# 87 – Tragadero del Satanas

After a few setbacks, the exploration of the Tragadero del Satanas can begin.



The expectation of the participants at the entrance to the Tragadero del Satanas.

Not everyone will be able to get off, we will have to come back tomorrow.

Raphael and Antonio are in the deep shaft.

# 88 – Tragadero del Satanas



The big shaft (84 m deep).

The Tragadero del Satanas is fully explored.  
The vertical of 84 m is impressive.

Bottom of the P 84 shaft.



## 89 – Tragadero del Arco

The Tragadero del Arco is explored, but it is blocked at -38 m.



Equipment of the Tragadero del Arco.



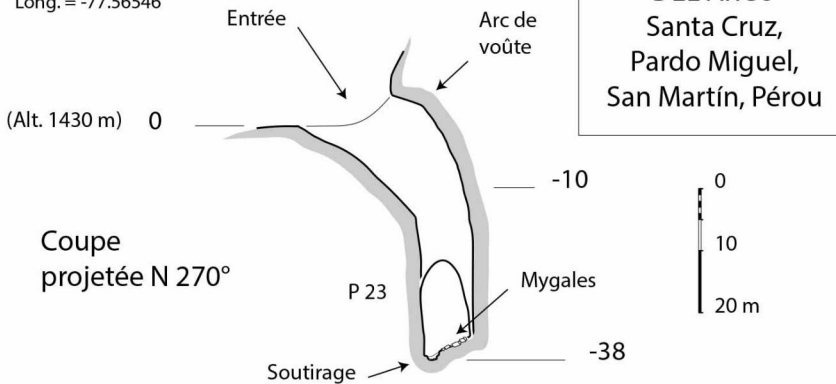
There are beautiful tarantulas at the bottom that live on prey that regularly falls into the shaft.

Tarantula, with silky hair, living at the bottom of the shaft.

# 90 – Santa Cruz balance sheet

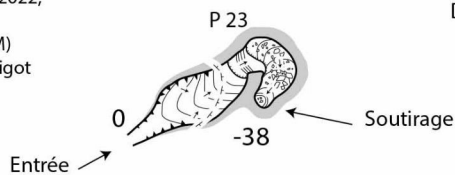
The record of incursions into the Santa Cruz area shows that exploring caves in the Alto Mayo may not be easy.

Coordonnées :  
Lat. = -5.76326  
Long. = -77.56546



**TRAGADERO DEL ARCO**  
Santa Cruz,  
Pardo Miguel,  
San Martín, Pérou

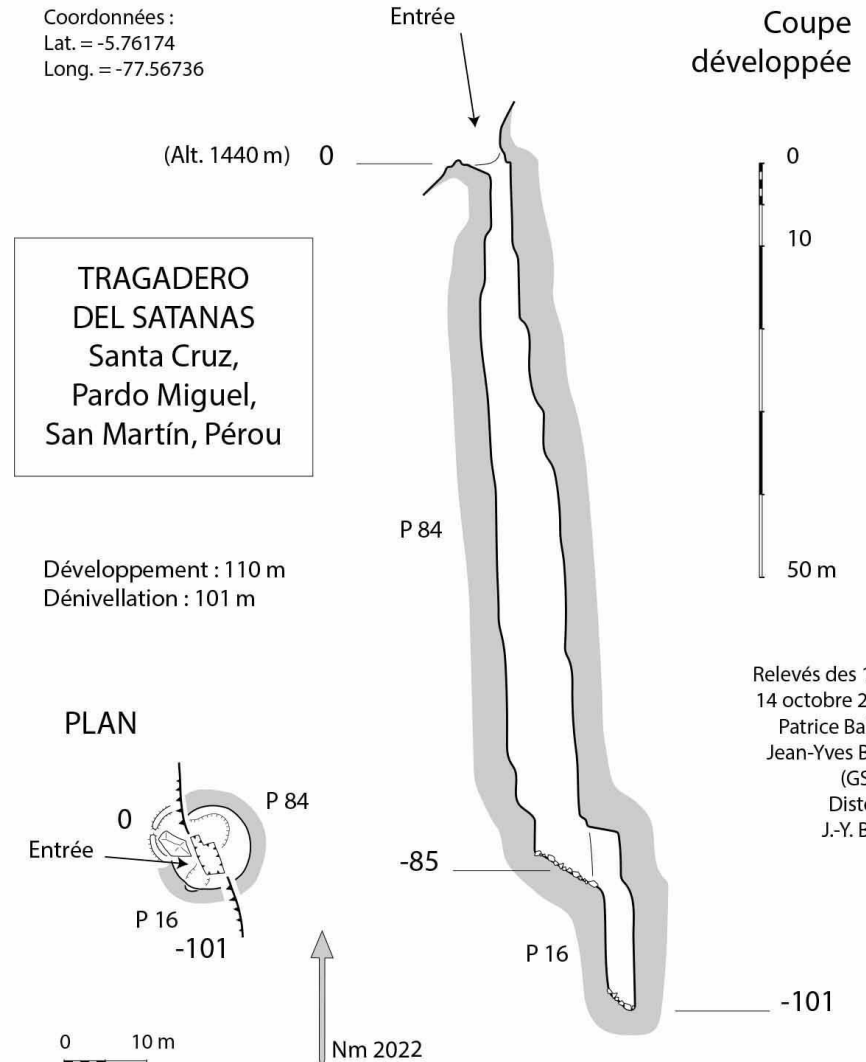
Développement : 62 m  
Dénivellation : 38 m



PLAN

Nm 2022

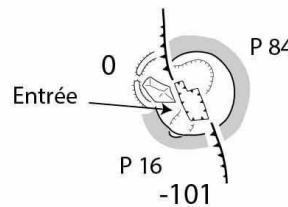
Coordonnées :  
Lat. = -5.76174  
Long. = -77.56736



**TRAGADERO DEL SATANAS**  
Santa Cruz,  
Pardo Miguel,  
San Martín, Pérou

Développement : 110 m  
Dénivellation : 101 m

PLAN



Nm 2022

Relevés des 13 et  
14 octobre 2022,  
Patrice Baby &  
Jean-Yves Bigot  
(GSBM)  
Disto X. :  
J.-Y. Bigot

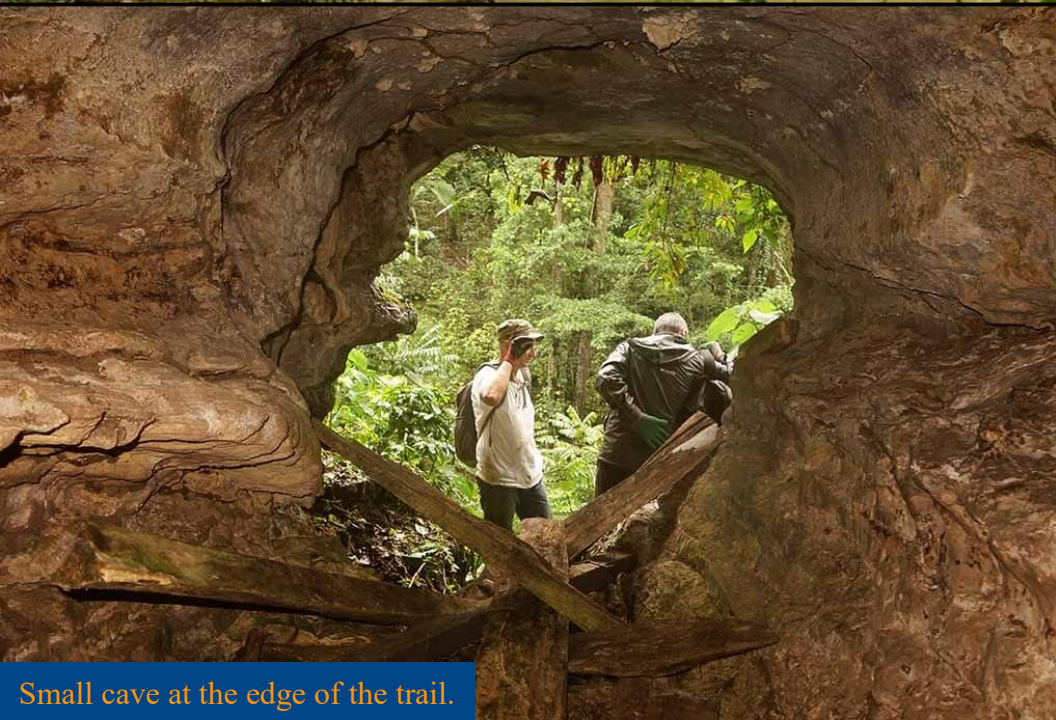
Survey of Tragadero del Satanas.

Survey of Tragadero del Arco.

# 91 – Prospecting under the rain



The resurgence in flood.



Small cave at the edge of the trail.

A prospection in the rain allows to locate some small caves around the Palestina camp. The resurgence of the Palestina Cave is in flood, and it is not easy to cross the river.

## 92 – Prospecting under the sun

A new day  
prospecting is  
undertaken in Palestina  
following a path that  
leads to La Florida,  
near Nueva Cajamarca.



Camino Cave entrance.



Blocks and speleothems.

Near a pass, a small cave  
opens at the side of a path;  
it's the Camino Cave  
which is 74 m long.

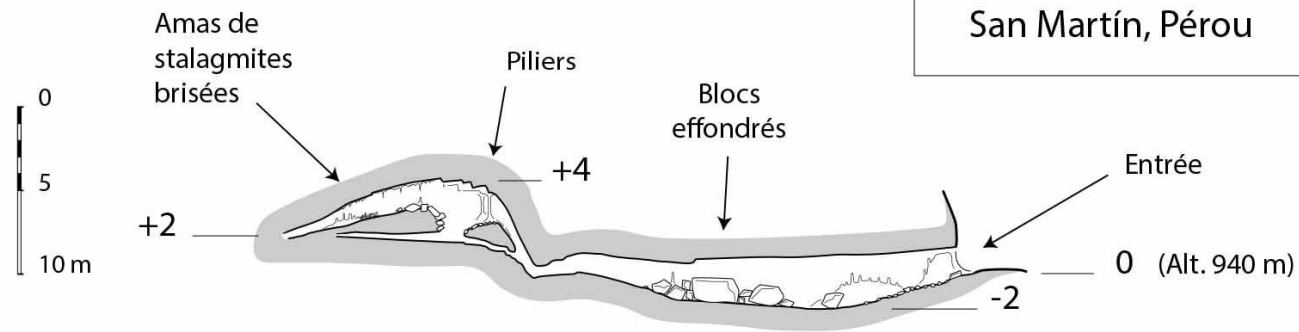
# 93 – Cueva del Camino

## Survey of Camino Cave.

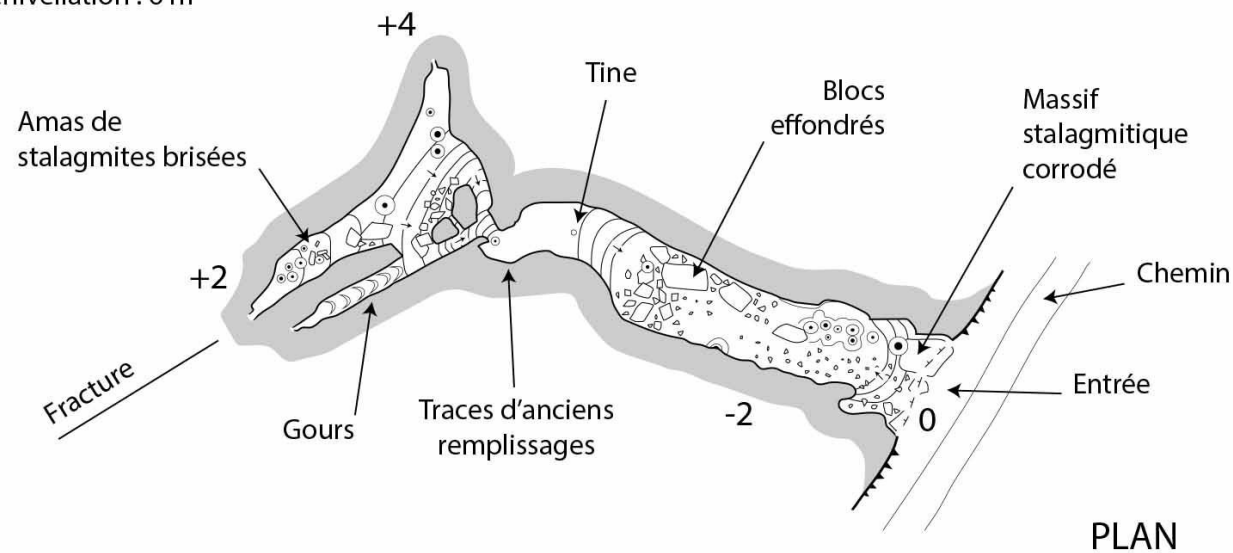
Coordonnées :  
Lat. = -5.93361  
Long. = -77.34586

Coupe  
projetée N 135°

CUEVA DEL CAMINO  
Palestina,  
Nueva Cajamarca,  
San Martín, Pérou



Développement : 74 m  
Dénivellation : 6 m



PLAN

Relevé du 16 octobre 2022,  
Raphaël Gueit &  
Jean-Yves Bigot (GSBM)  
Disto X. Report : J.-Y. Bigot



0 10 20 m

## 94 – Rain ants

In the evening, a rain of ants falls on our camp (swarming).

Bats are the first to help themselves, and so do we.



Immediately prepared and fries by Jessi and Celmira.



Ants were picked up in large numbers.

The aperitif is served.

16-10-2022

# 95 – Dispersion of participants

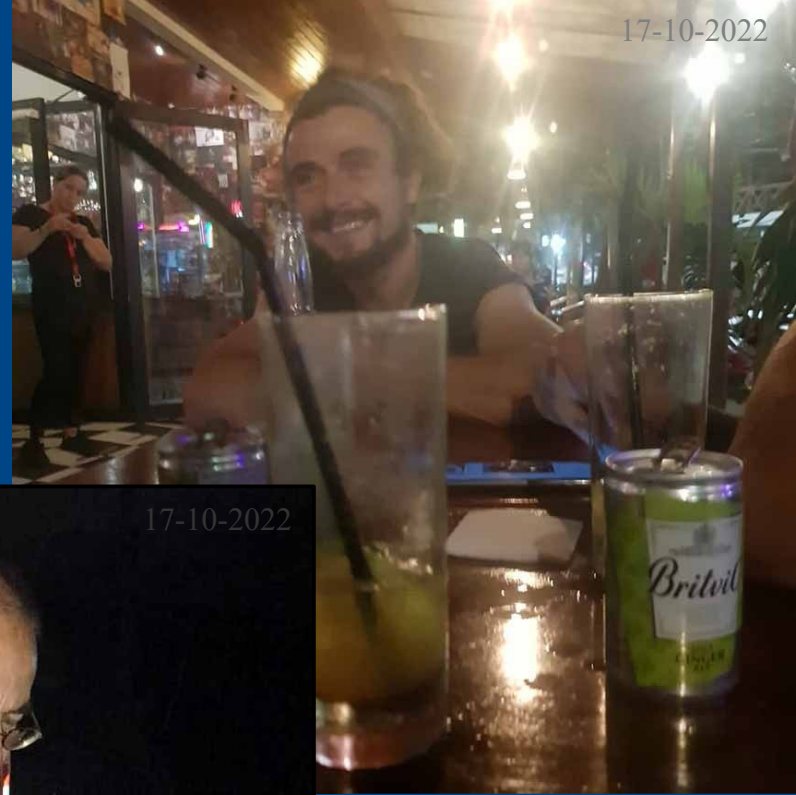


Collection of samples on the Marañón.

It is the end of the Palestina camp. Part of the team is already in the north of the Amazonas region collecting water samples.

Preparing for the next reconnaissance of Vista Alegre.

17-10-2022



17-10-2022

Festive expectation in Tarapoto.

Another group is in Tarapoto and awaits the plane from Lima.

Only Tonio and Jean-Yves remain in Palestina to prepare the trip of Vista Alegre.

# 96 – Vista Alegre



Without a vehicle, traveling is not easy. But Antonio and Jean-Yves manage to reach the village of Vista Alegre (Amazonas).

The only vehicle that goes to Vista Alegre.



The view from Consuelo.





## 97 – Vista Alegre



Francisco and Tonio in front of springs of the Rio Chayuararca.



A survey of the people of the village indicates that the caves are not so easy to find...

Vista Alegre Village.

98 —  
Vista  
Alegre



Old path.



Naciente del Rio Chayuararca.



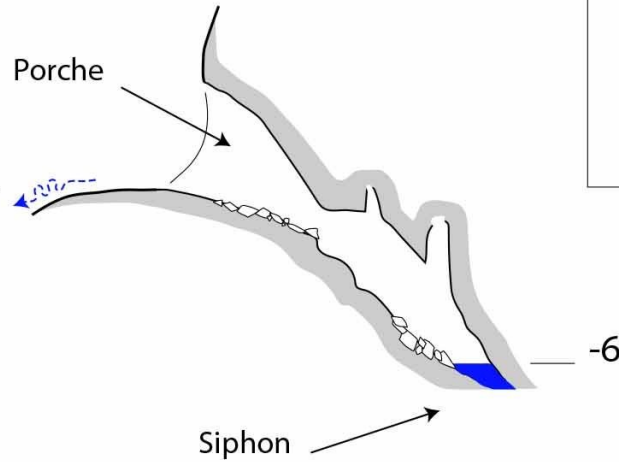
Surroundings of the Rio Salas.

The exploration of the Naciente del Rio Chayuararca turns out to be very disappointing. Further, the recognition of a path to a bridge over the Rio Salas allows to confirm the existence of old chachapoyas trails as there are in Granada.

# 99 – Vista Alegre

Coupe  
projetée N 56°

(Alt. 1540 m) 0



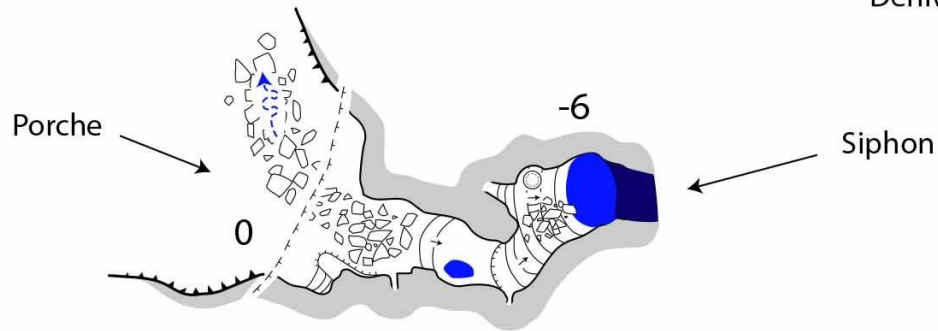
NACIENTE DEL RIO  
CHAYUARARCA  
Vista Alegre,  
Rodriguez de Mendoza,  
Amazonas, Pérou



Coordonnées :  
Lat. = -6.15030  
Long. = -77.30688

Développement : 13 m  
Dénivellation : 6 m

Survey of the  
Rio Chayuararca  
spring.



Relevé du 20 octobre 2022,  
Antonio de Pomar &  
Jean-Yves Bigot (GSBM)  
Disto X. Report : J.-Y. Bigot



Plan and section of the  
Rio Chayuararca  
spring.




*100 – Vista Alegre*

In Vista Alegre,  
it's the bean  
harvest.

20-10-2022

Bean harvest.

The women toss  
the pods into the air  
on a tarp to collect  
beautiful yellow  
beans.



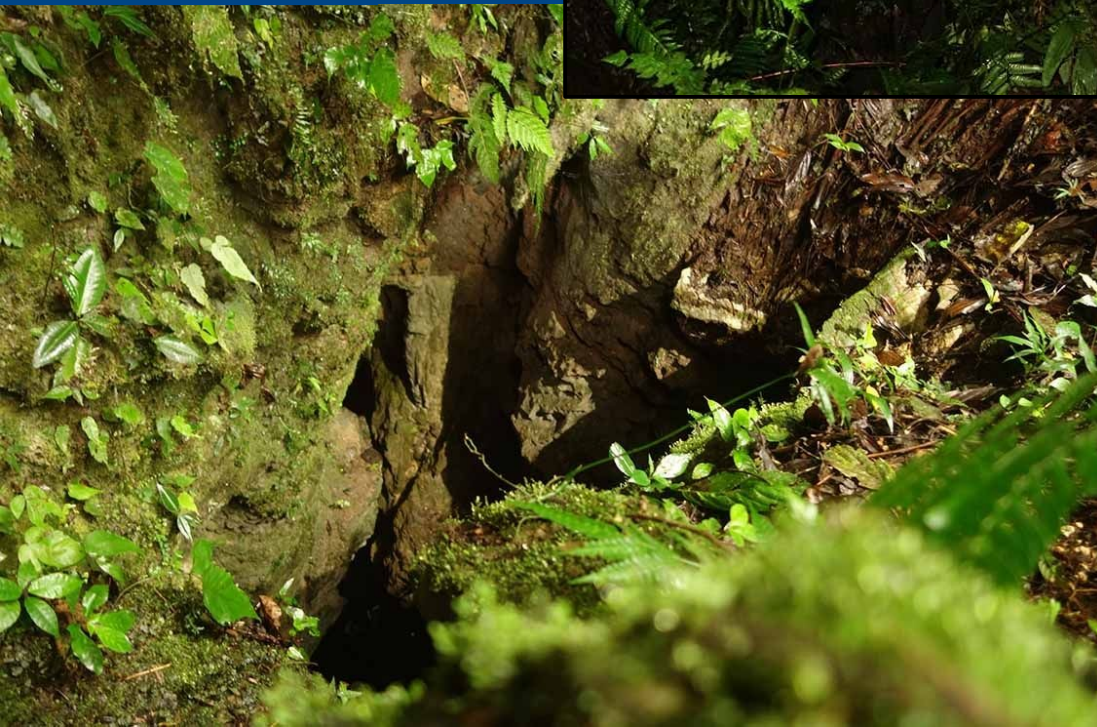
# 101 – Vista Alegre



Ender and Tonio.

At the end of the afternoon, we find a guide, Ender Gallo, who leads us to a sinkhole that we just spot.

The Ender Gallo sinkhole.



# 102 – Vista Alegre

Very early, we recognize the entrance of the Tragadero de la Punta del Lemon indicated by Francisco.



From right to left: Johnny, his wife and Antonio.



Next, we meet Jhonny and his wife going up to their "chacra" (fields in the mountains). They show us the house of a man who knows a hole in his property...

Bridge over the Rio Salas.

## 103 – Vista Alegre

Sure enough, we find the owner, Josué Loaiza Llatas, who leads us to the entrance of the Agujero de Yura.



Tonio and Josué in front of the hole.

Josué's property is dominated by a large limestone peak that is easily recognizable in the landscape. Of course, Vista Alegre is an interesting sector, but it will take a lot of research before make great discoveries.

## 104 – Back to Palestina

After a few days at Vista Alegre,  
it's time to come back at Palestina  
to prepare our departure for  
Luya (Chachapoyas).

The comfort of Palestine is appreciated.



*Saguinus fuscicollis* better known  
as "mono pichico".

A little monkey comes  
by from time to time to  
check if we are working.



# 105 – Departure

Three motorcycle taxis are required to transport all materials from Palestina to the Nueva Cajamarca bus station.



Then, Chachapoyas and Luya in a van...



All materials must be transported in Luya, near Chachapoyas (Amazonas).

# 106 – Luya



From left to right: Jean-Yves Bigot,  
Liz Hidalgo and Antonio de Pomar.

The equipment is sorted, then stored at the ECA premises in Luya.  
But already Antonio and Jean-Yves have to leave by  
the night bus to Cajamarca.

# 107 – Cajamarca



The mining town of Cajamarca.

26-10-2022



Cajamarca is a mining town. Residents fear water pollution with the opening of a new mine.

Demonstration in front of Regional Prefecture of Cajamarca.

The path at the foot of the bars in which the Cueva de la Peña Blanca opens.

## 108 – Peña Blanca



Panorama from the access path to the cave.

Part of the path of the Cueva de la Peña Blanca (San Juan) disappeared at the following a landslide. We don't have any ropes in our luggage...  
Once on the narrow ledges that dominate the void and the road below, Jean-Yves stalls and gives up. Back to Cajamarca, we'll come back later with ropes...

# 109 – Cajamarca

Historic site of Peru.



Short recreation in Baños del Inca, where there is a thermal site equipped.



Individual bath with temperature setting.



Thermal water outlet (70°C).

# 110 – Cueva de la Peña Blanca



The ropes provide access to the entrance to the cave under satisfactory safety conditions.

Ledge giving access to the Cueva de la Peña Blanca, San Juan, Cajamarca.

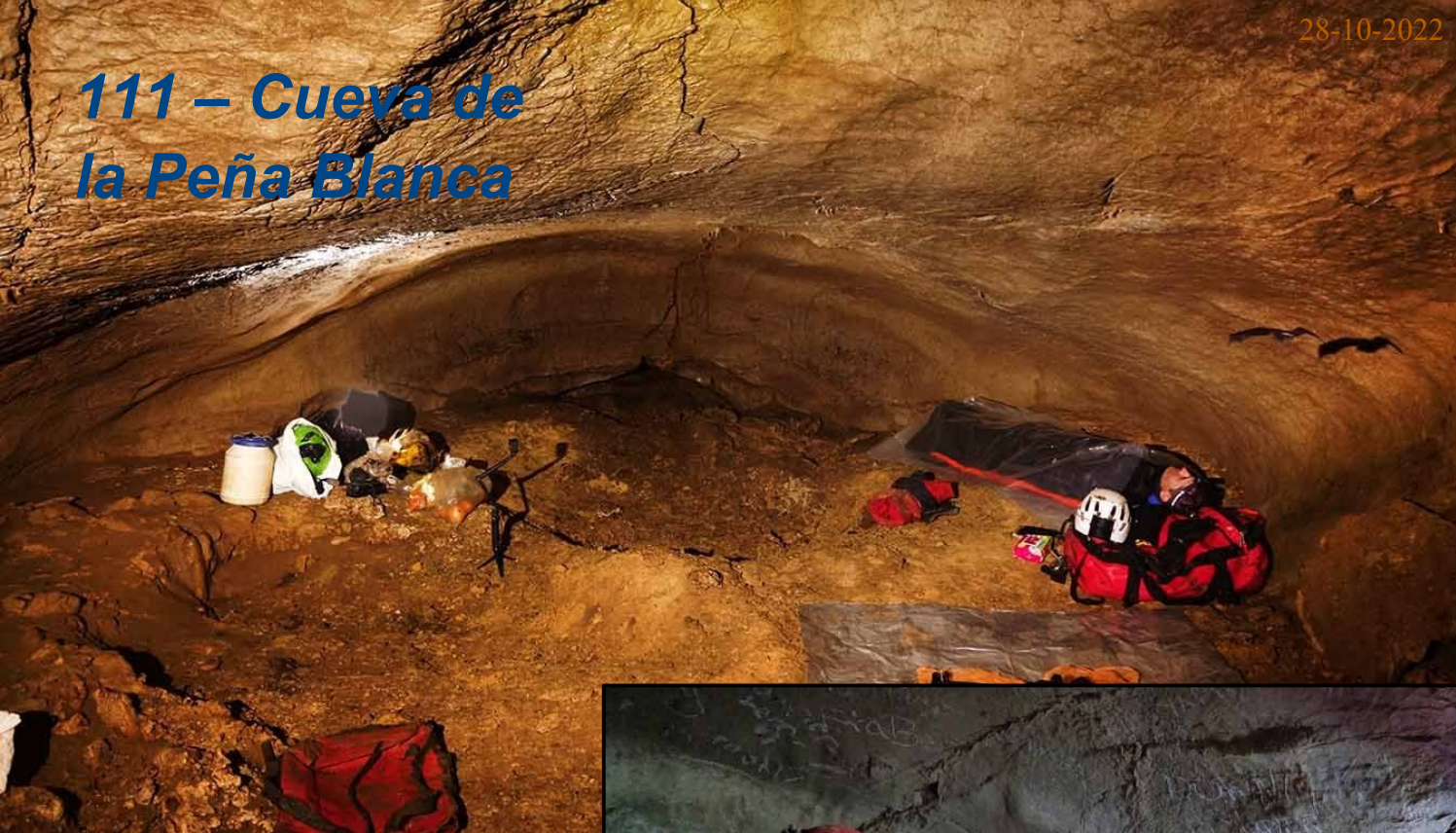
Six hours of surveying are needed, the cave is 582 m long and 101 m deep.

Descent of the first step.



28-10-2022

## 111 – Cueva de la Peña Blanca



Return to the bivouac around 7 p.m. to eat and sleep.

The bivouac...  
That we have to share with bats.

The bivouac is located near a narrow passage that bats must use to get out of the cave. Hundreds of creatures spin loudly above our heads...



Meal after the topographical survey.

## 112 – Cueva de la Peña Blanca

After a bad night underground, a few shots are taken, in particular in the Maces room.



The Maces room.

The bats have completely corroded the walls and the speleothems, to the point of transforming the stalagmites in maces.

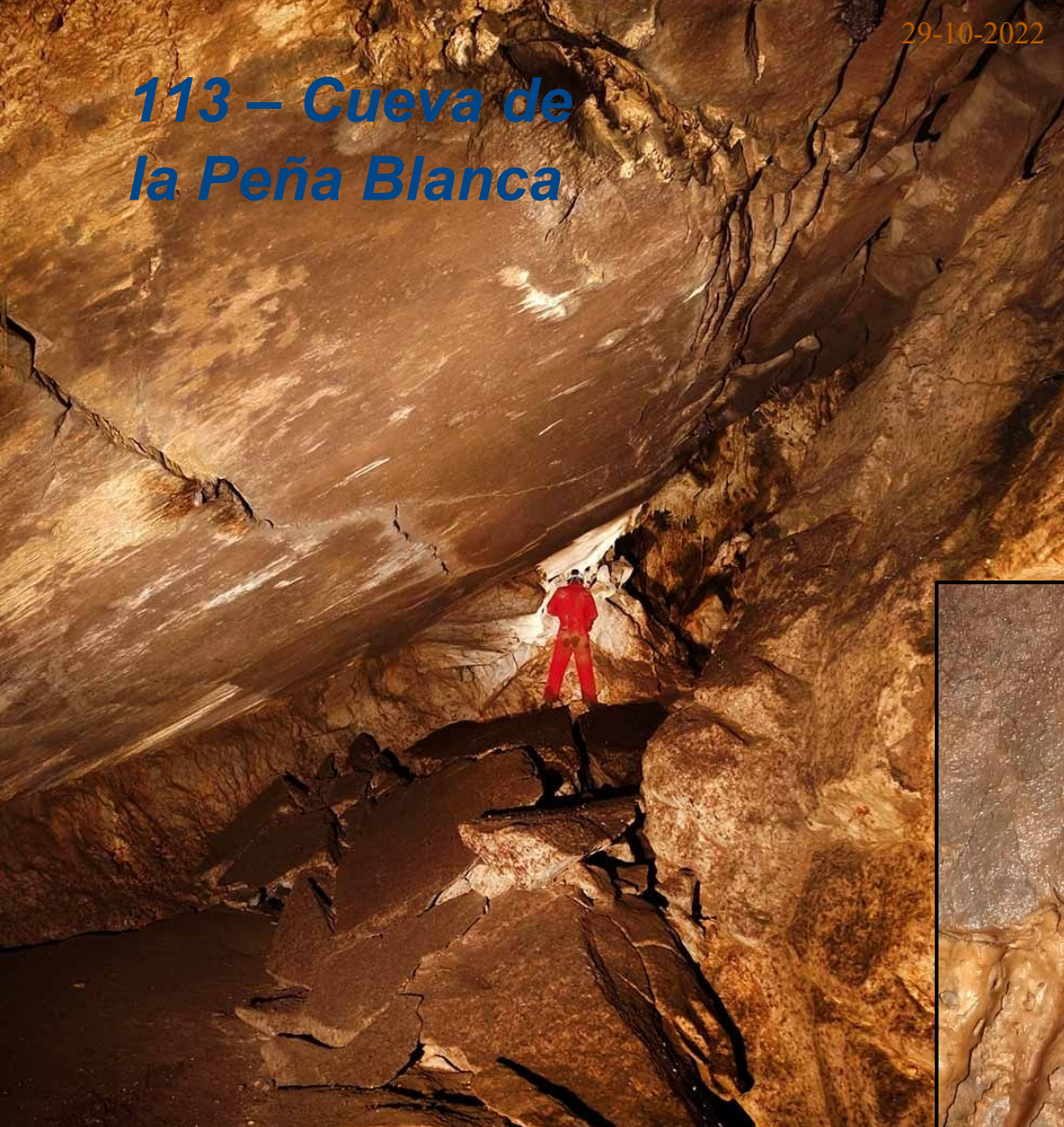




29-10-2022

## 113 – Cueva de la Peña Blanca

The Flat Ceiling room is the result of a collapse of strata which allows us to observe the strong dip of the limestone layers.



The Flat Ceiling room.

Swarm of bats.

29-10-2022

## 114 – Cueva de la Peña Blanca



After 11 hours past in the cave, we finally come out outdoors.



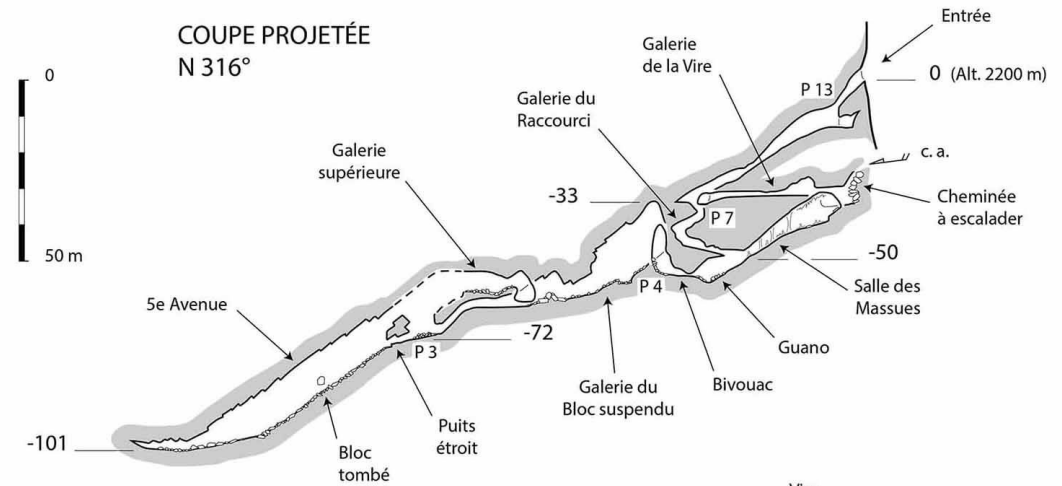
Shortcut Gallery.

After only 15 minutes of waiting, we find a "combi" (van) on the road that takes us back to Cajamarca well muddy (mud and guano) and very tired.

Daylight in the entrance shaft.

# 115 – Cueva de la Peña Blanca

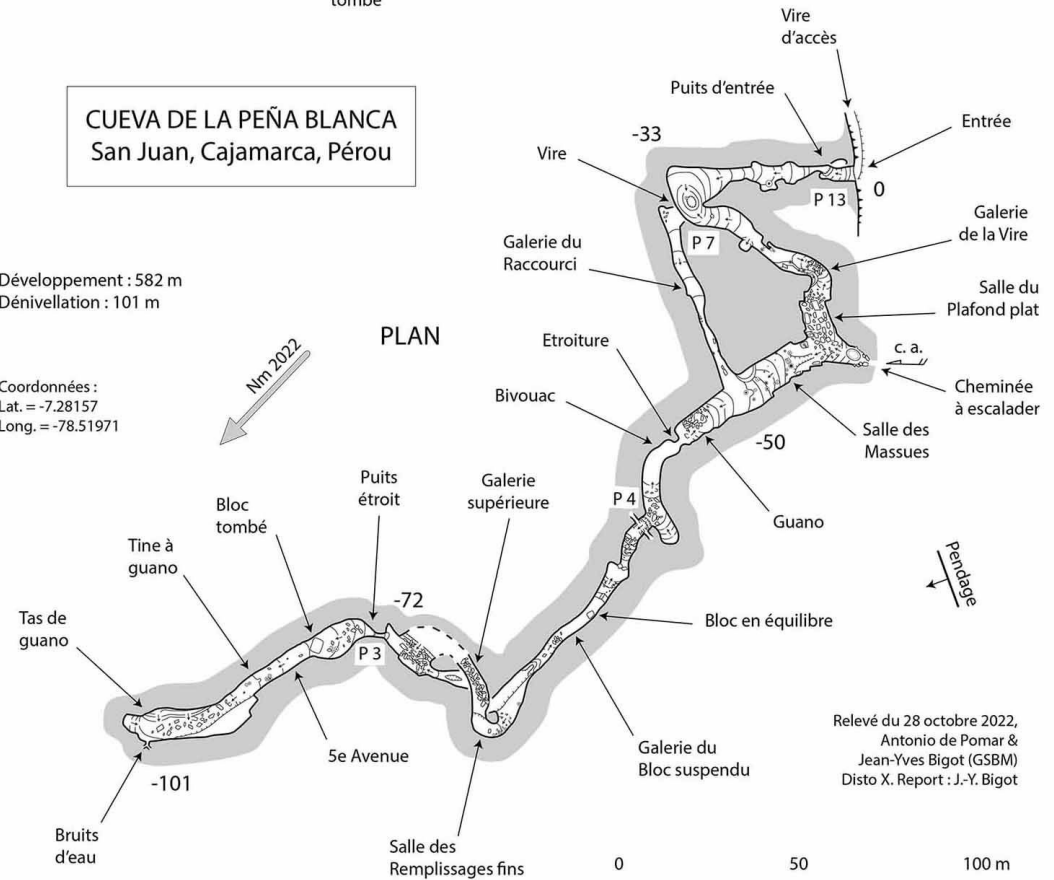
Survey of the  
Cueva de la  
Peña Blanca.



CUEVA DE LA PEÑA BLANCA  
San Juan, Cajamarca, Pérou

Développement : 582 m  
Dénivellation : 101 m

Coordonnées :  
Lat. = -7.28157  
Long. = -78.51971



Relevé du 28 octobre 2022,  
Antonio de Pomar &  
Jean-Yves Bigot (GSBM)  
Disto X. Report : J.-Y. Bigot

Plan and section of  
the Cueva de la  
Peña Blanca.

# 116 – Cajamarca



The city of Cajamarca view from Santa Apolonia.



The day ends with the cleaning of the equipment and the visit to the tourist site of Santa Apolonia.

Material drying.

# 117 – Pacchagon



Pacchagon's mill.

We have a date with Damason in the municipality of Asunción where opens Pacchagon's Ojo. This is a channeled source that once powered a mill.

Bypass system and source capture.

30-10-2022

## 118 – Pacchagon

The Ojo de Pacchagon is penetrable on a few meters and ends by a sump.



The underground river  
of Pacchagon' mill

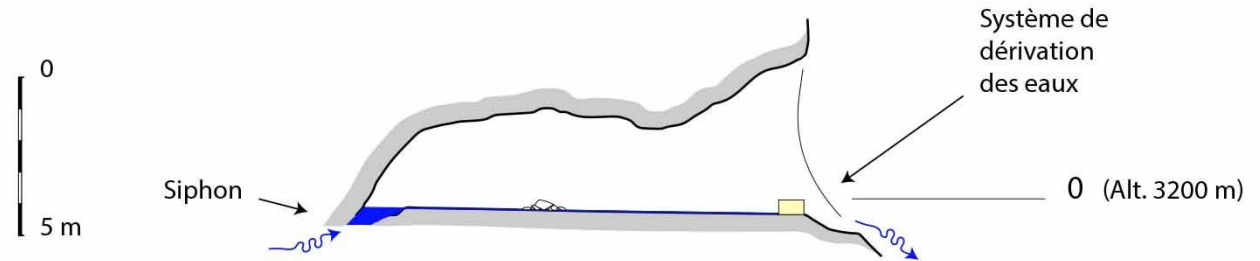
# 119 – Pacchagon

Survey of  
the Ojo de  
Pacchagon.

Plan and section  
of the Ojo de  
Pacchagon.

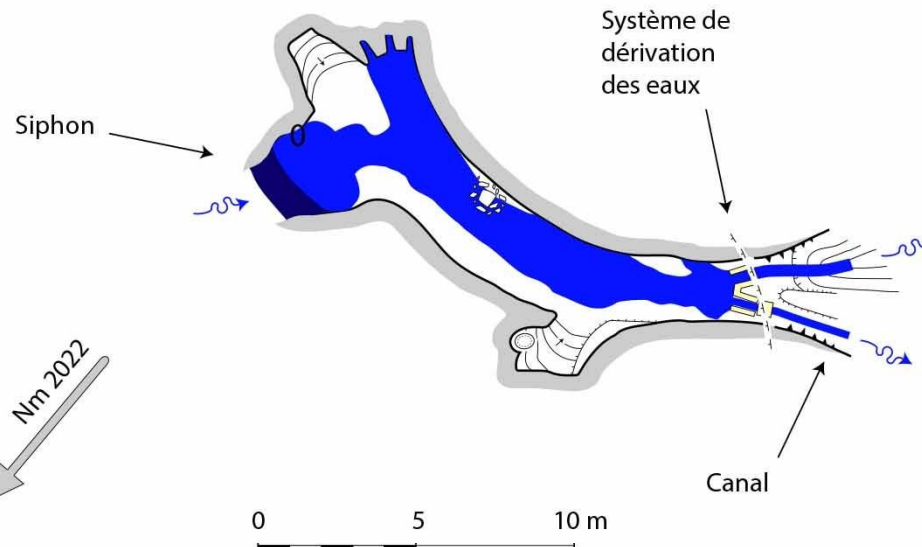
OJO DE PACCHAGON  
Asunción, Cajamarca, Pérou

Coupe projetée N 320°



Coordonnées :  
Lat. = -7.36197  
Long. = -78.51717

Développement : 20 m  
Dénivellation : 1 m



PLAN

Relevé du 30 octobre 2022,  
Damason Leon Crisologo,  
Antonio de Pomar &  
Jean-Yves Bigot (GSBM)  
Disto X. Report : J.-Y. Bigot

## 120 – San Antonio de Chiquildo



Cave

Landscape near San Antonio.

After a few hours of walking, we reach the Cueva de San Antonio de Chiquildo. The drought in the Andes has not yet dried up the source fed by an underground river.

Spring capture channel of San Antonio de Chiquildo.





## 121 – San Antonio de Chiquildo



The section of the gallery has side notches.

The river occupies the entire width of the gallery and flat stones lie everywhere in the cave.

Strange flat stones were brought into the Cave of San Antonio de Chiquildo.



# 122 – San Antonio de Chiquildo



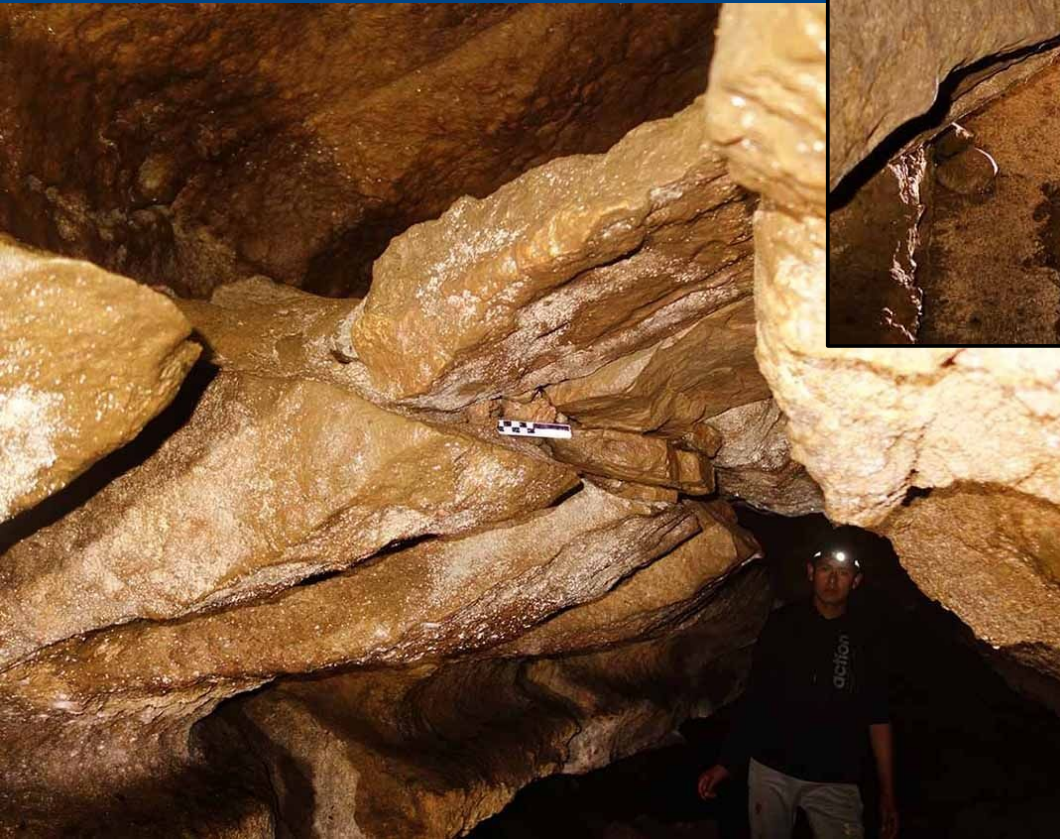
Heap of various bones.

The river bed is littered with human bones.

Human skulls.

## 123 – San Antonio de Chiquildo

Large flat stones were laid out flat across the duct to form sorts of bridges...



Bridge n° 2.

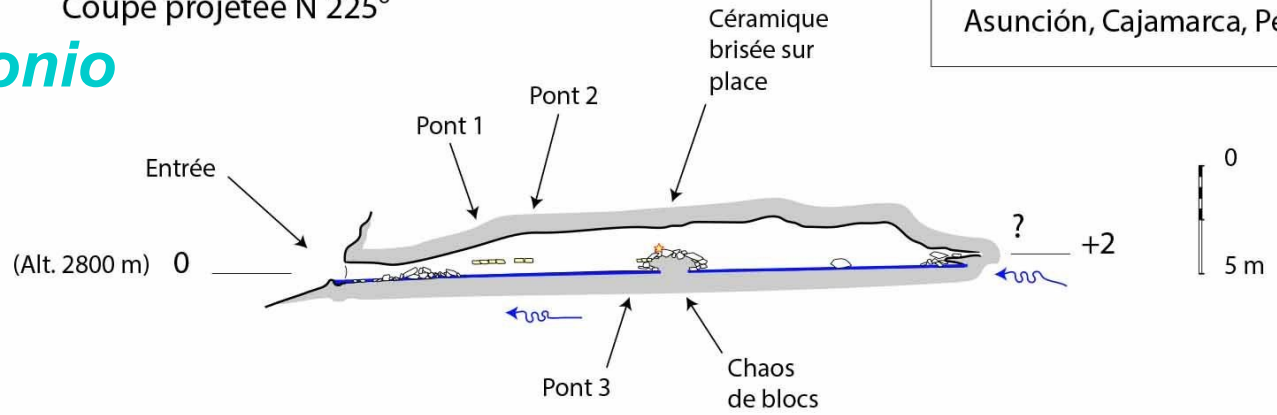
It's probably a way to increase the flat surfaces out of the water in order to deposit bodies or bones (burials).

Bridge n° 1.

# 124 – San Antonio de Chiquildo

CUEVA DE SAN ANTONIO DE CHIQUILDO  
Asunción, Cajamarca, Pérou

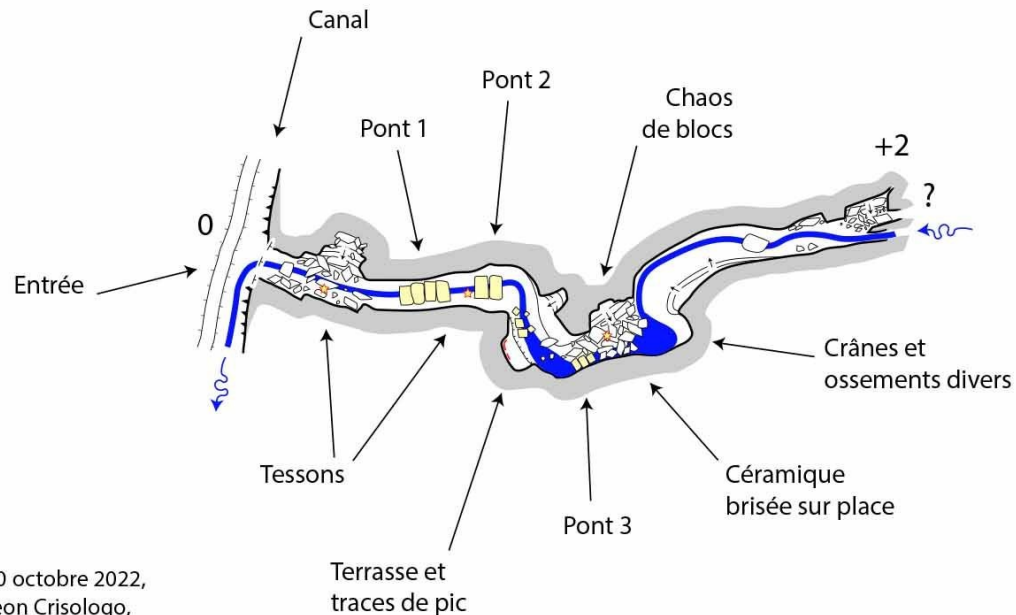
Coupe projetée N 225°



Coordonnées :  
Lat. = -7.34221  
Long. = -78.50684

Développement : 70 m  
Dénivellation : 3 m

Survey of the Cueva de San Antonio de Chiquildo.



Relevé du 30 octobre 2022,  
Damason Leon Crisologo,  
Antonio de Pomar &  
Jean-Yves Bigot (GSBM)  
Disto X. Report : J.-Y. Bigot

0 10 20 m

Plan and section of the Cueva de San Antonio de Chiquildo.

# 125 – Cajamarca

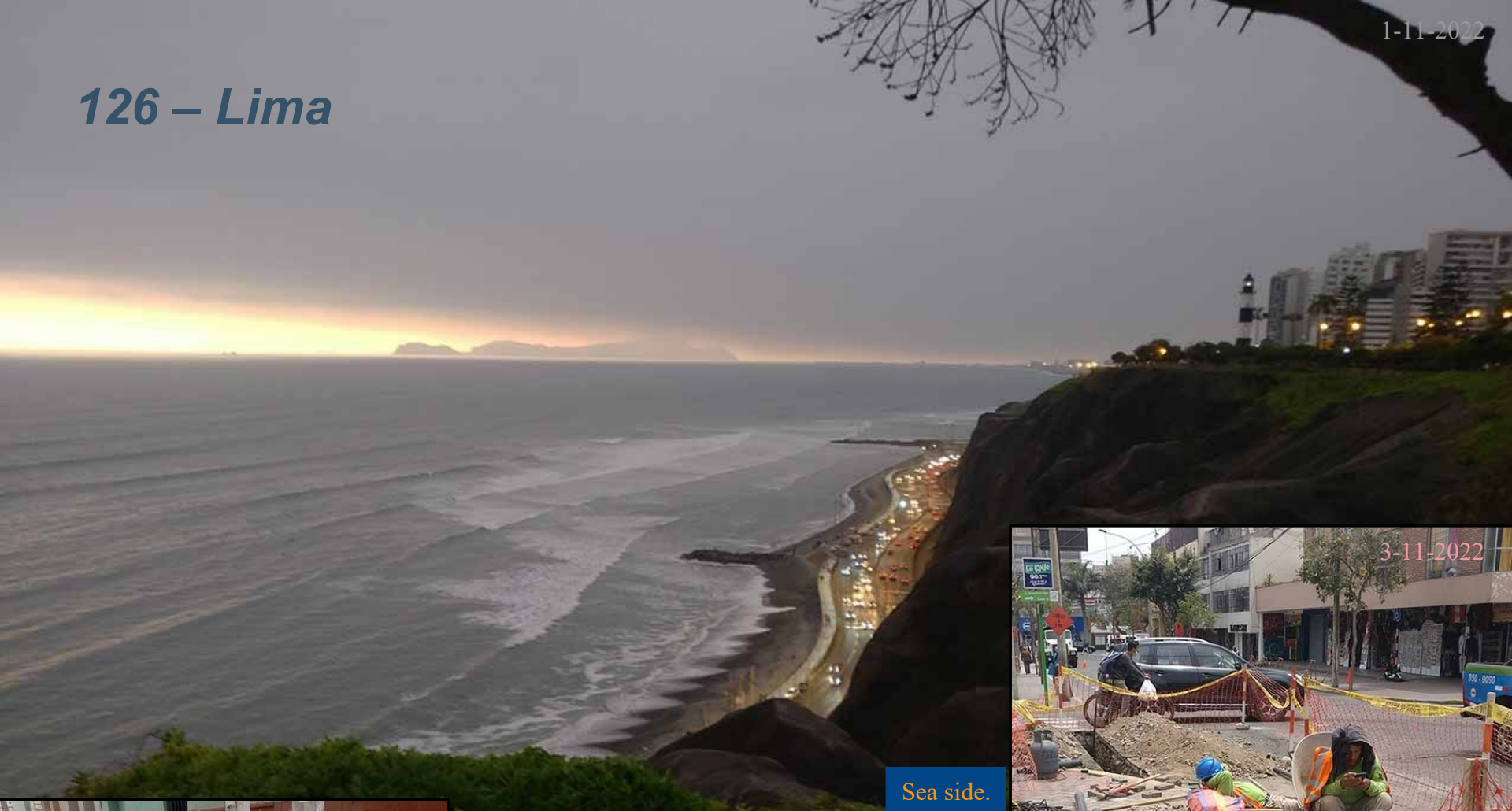
Last day before  
departure by night  
bus to Lima.



The Cathedral.

Cajamarca  
market.

# 126 – Lima



Sea side.



2-11-2022

Peugeot 404 being repaired.



3-11-2022

Lunch break.

Last days in Lima.

**127 – *The end***

The end