



Sicily 2017

*Speleological Mission in
the Sicily Island (Italy)
organized by the
University of Palermo*

From 26th february to 5th march 2017

2 – The team



Didier Cailhol



Marjan Temovski



Philippe Audra



Ilenia M. d'Angeli



Pietro Valenti

3 – The team



Marco Vattano



Jo De Waele



Angelo Provenzano



Jean-Yves Bigot

4 – Monte Magaggiaro

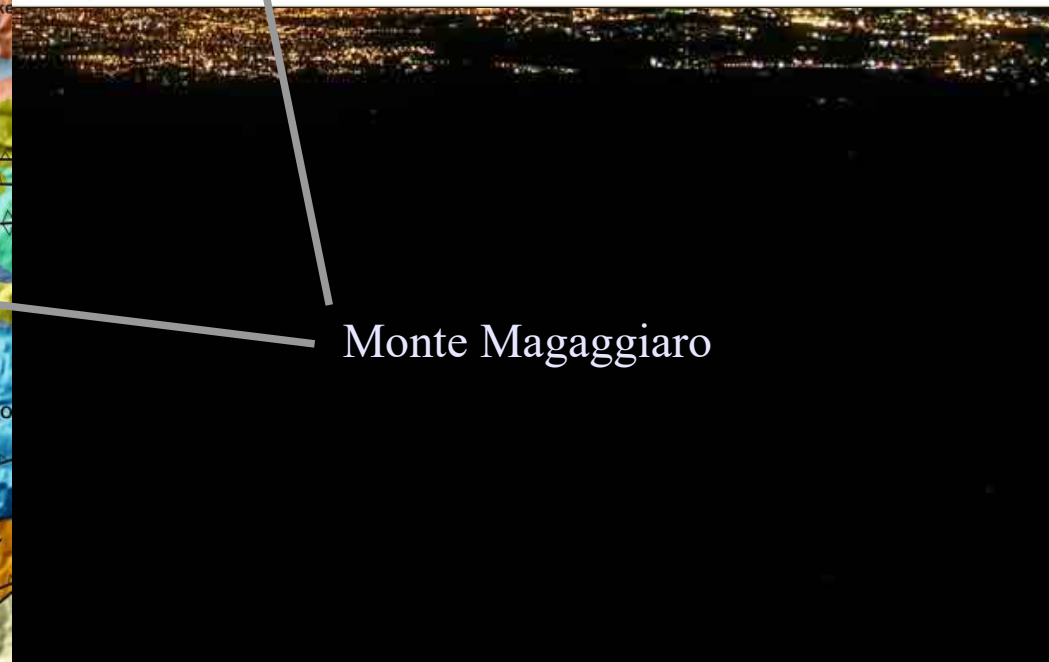
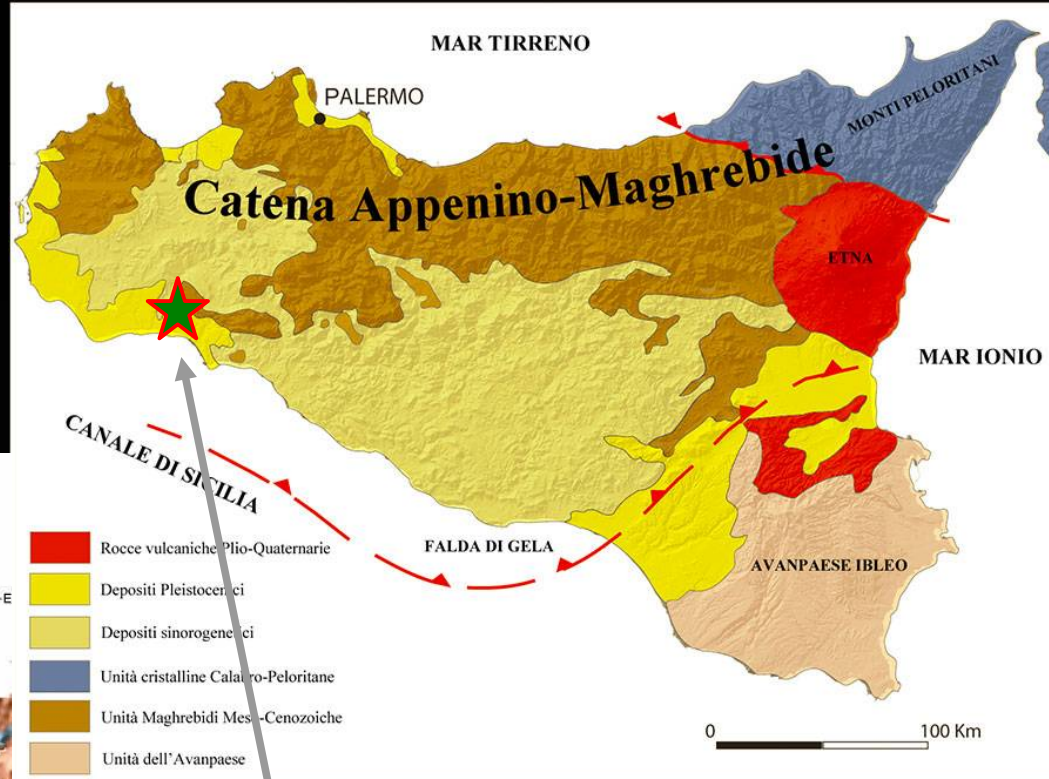
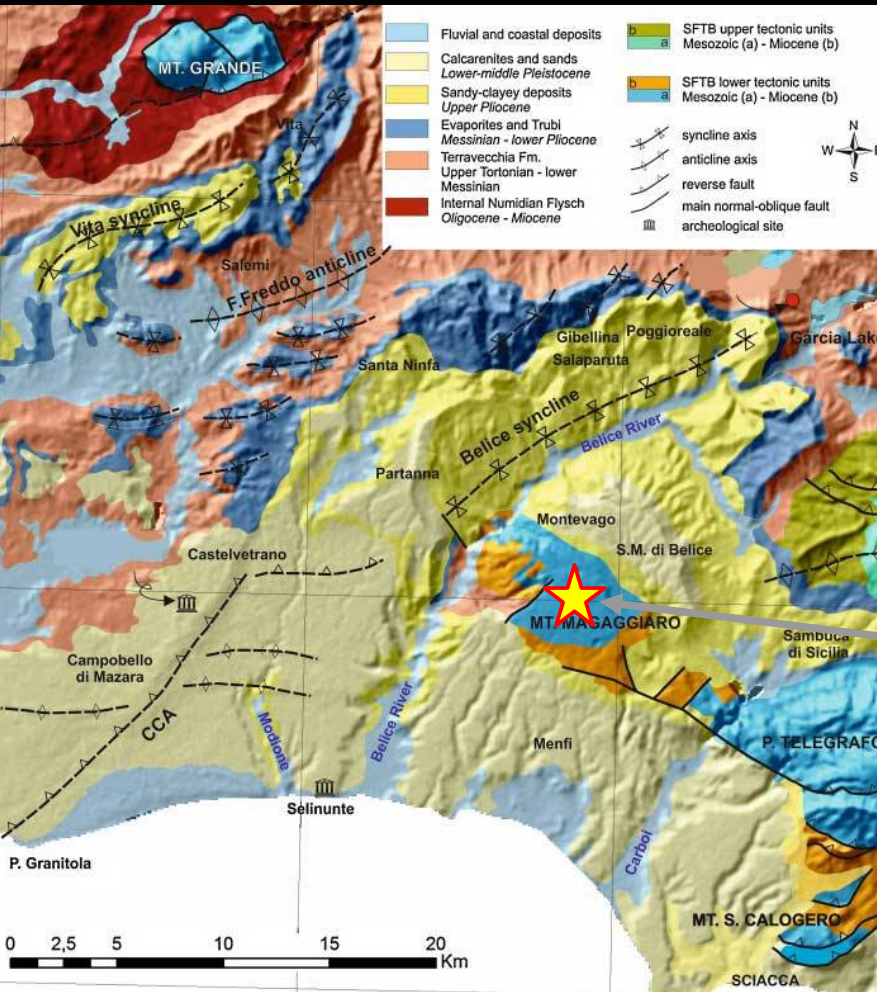
Yesterday, we were in Palermo and our first site is located near the Monte Magaggiaro in the S-W of Sicily.

Welcome
to Sicily !



5 – Monte Magaggiaro

Location and geological context.



6 – Monte Magaggiaro

The limestones are Jurassic Age and the calcarenites are Pliocene Age; the region has been uplifted by a plio-pleistocene tectonic.



27-2-2017

The limestones cut by ravines (in the foreground), were used as quarries (in the background).

7 – Grotta dei Personaggini

There are several entrances to the Personaggini Cave (Montevago) long of 1700 m.



The goal of the mission in Sicily is to recognize the hypogenic caves morphologies, to sample and to put our ideas to the test.

8 – Grotta dei Personaggini



The cave (19°C) is occupied by one species of bats:
Rhinolophus euryale (Blasius, 1853).

The swarm guano have corroded the rock. We can see
deep channels like a lapiaz.

9 – Grotta dei Personaggini

Few bats live in here...



The narrow conduits are a quiet place for them.

10 – Grotta dei Personaggini



The layers of limestones are inclined and the hypogenic cave is developed along the dip.
The landscape is characteristic of wavecut platform tilted by the recent tectonic.

11 – Grotta dei Personaggini



Second entrance of
the Personaggini Cave.

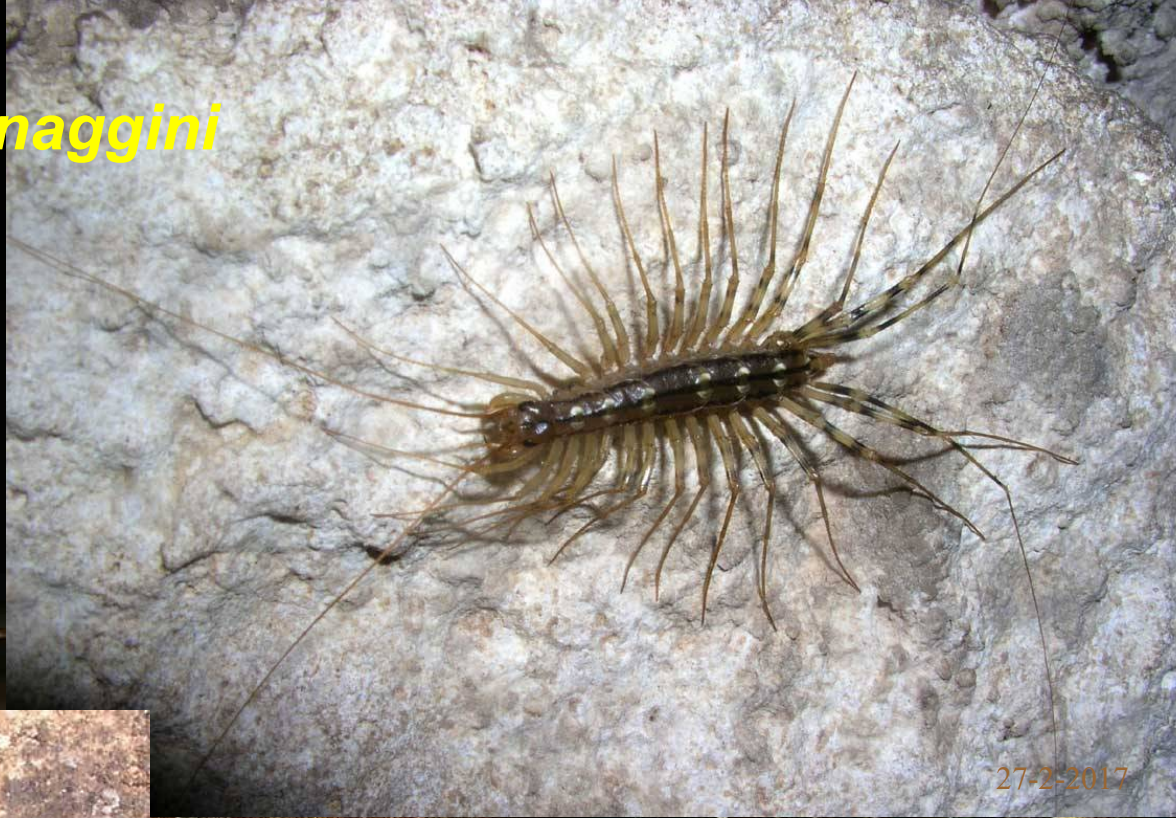
12 – Grotta dei Personaggini

The conduits and rooms of this cave are so small, we have to crawl to get to interesting places.



13 – Grotta dei Personaggini

The cave is occupied
by different insects
specialized in guano...



And millepedes (*Scutigera*).

14 – Grotta dei Personaggini

There are also
gastropods
(*Oxychilus*)...



And real cave troglobites.

15 – Grotta dei Personaggini

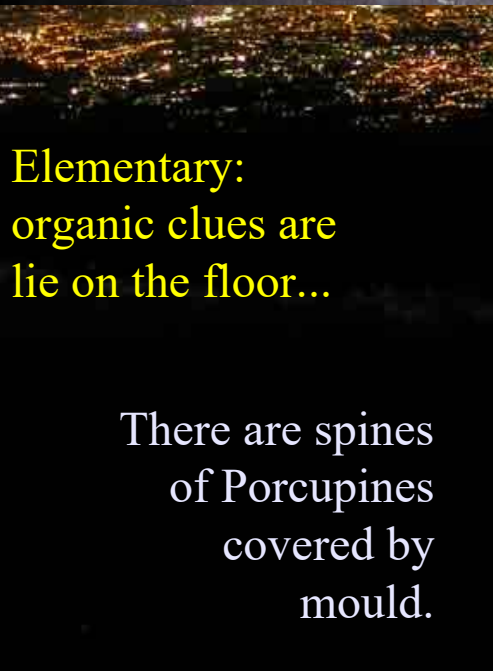
The blocks and walls of the cave were polished by animals. We only have to pick up the clues to find out what kind of animal did it.



16 – Grotta dei Personaggini



Hystrix cristata



Elementary:
organic clues are
lie on the floor...

There are spines
of Porcupines
covered by
mould.



17 – Grotta dei Personaggini



There are several cupolas made by condensation-corrosion (CC) process. But many bats are occupied the cupolas during a long time. And we don't know if the cupolas result to bats or CC...

18 – Grotta dei Personaggini

In the small room near the entrance, a stalagmitic pillar shows axe marks.

Who did try to cut the pillar ?
It is not a tree,
isn't it ?

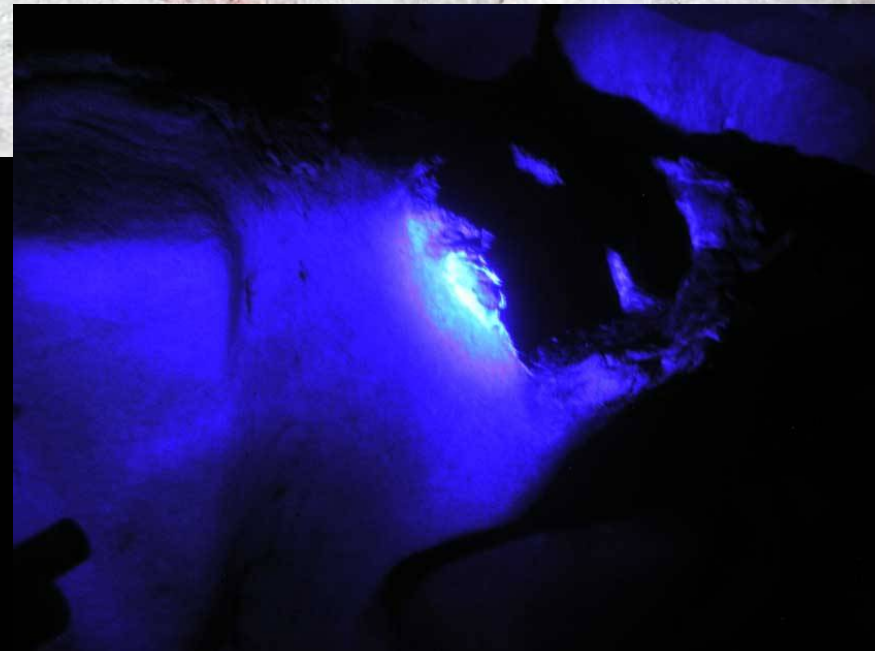


19 – Grotta dei Personaggini



Crust layers made by the guano of bats.

UV light reveals calcite.
But here there ain't calcite.
It's only phosphate crusts.



20 – Grotta dei Personaggini

Indeed, there are many marks of dissolution...



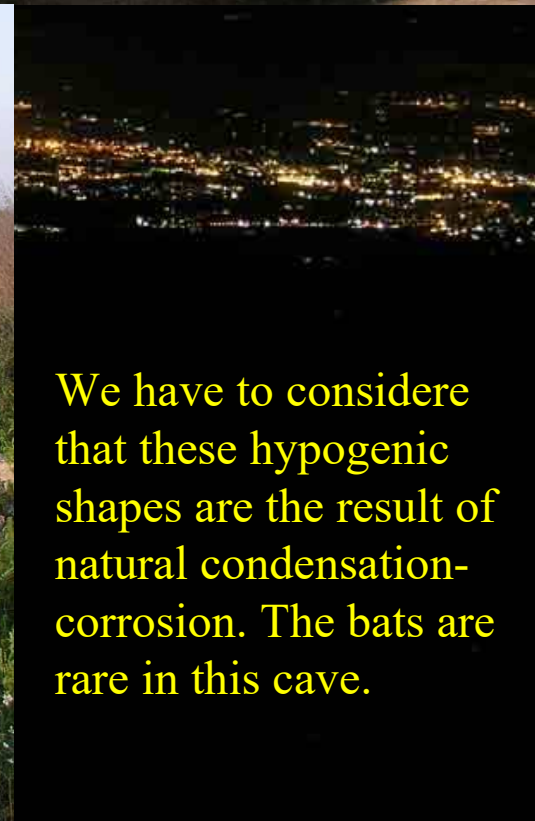
27-2-2017



But the presence of bats in the cave disturbs the speleogenetic interpretations.

21 – Grotta Barone

Near the Personaggini Cave, there is a warm air flow (26°C) spreading from a small cave. The Barone Cave is located in the cactus field and shows astonishing corroded shapes.



We have to consider that these hypogenic shapes are the result of natural condensation-corrosion. The bats are rare in this cave.

22 – Grotta Barone



The entrance is narrow, but Jean-Yves Bigot and Marjan Temovski want to have a look in this cave.

23 – Isnello

New destination : Isnello in the east of Palermo and the visit of Abisso del Vento.



Isnello

24 – Isnello

A nice mountain village in Sicily.



28-2-2017

25 – Isnello

The church of San Michele Arcangelo dominates the village.



On the Caduti Square, the
Casa delle Fanciulle Ss.
Rosario Suore Passioniste.

26 – Isnello

It's Market Day in Isnello.



MISURE DI LUNGHEZZA
METRO ²⁴⁰ PALMO ²⁶ CENTIMETRI
CANNA EGUALE A 2 METRI E 6 CENTIMETRI

ANNO
1862
28 APRILE

From 1862, the market stall is measured in meters.

27 – Isnello



It's a quiet life in Isnello Village.

28 – The dream team

The team is ready to go down to the Abisso del Vento.



29 – *Abisso del Vento*

The Abisso is located in the mountains and is 220 m depth.



30 – *Abisso del Vento*

The entrance is on the terraces.
This cave is known during the
Bronze Age.



31 – *Abisso del Vento*

Near the entrance, there is a stalagmite cut like a tree trunk...



Why do sicilians believe that stalagmites are like plants ?



32 – Abisso del Vento



Ropes are needed in the
Abisso del Vento.

We can see that several
fractures are been karstified
in this hypogenic cave.

33 – *Abisso del Vento*

The cave offers many fine, laminated, indured sediments.



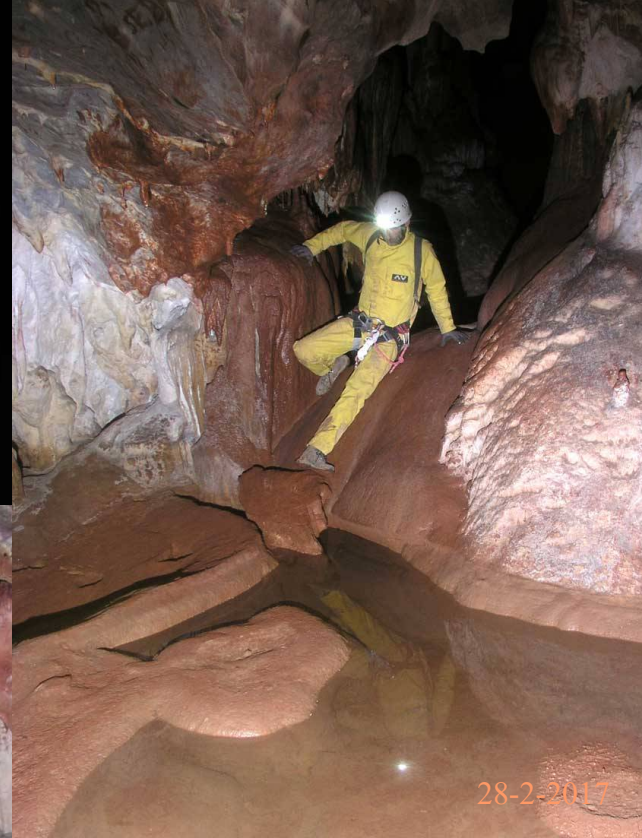
28-2-2017



Their surface is covered with white deposits made by ferro-oxydant mushrooms.

34 – *Abisso del Vento*

There are many pools in this part of the cave. We know that the water was used by the prehistoric men.



Hum ! This block in this pool is so handy... Someone must have placed here...

35 – Abisso del Vento

We look for the prehistoric route,
make up inclined pits and paths...



This human tooth shows a dental
caries. The life was hard during the
Bronze Age !



The blocks, located on both side of the
path, are very strange.
There is a white patina on these blocks
(mushroom). This path is probably
prehistoric making it possible to access
to the pools.

36 – Abisso del Vento

Ilenia M. d'Angeli is a mineralogist, she prepares a thesis at the University of Bologna.



A sample of material is made the crystals of calcite.

Discussions are needed so that everybody can share his opinions.

37 – Abisso del Vento

A hydrochloric acid test is made on the crystals...



And a control of CO2 in different places of the cave as well.

38 – *Abisso del Vento*

We can see interesting forms called « boxworks » on the walls.



These are veins of calcite emphasized by the corrosion. The red deposits of clay in the « boxworks » show that water came back in the conduits.

39 – *Abisso del Vento*

It's « Martedì grasso »
(Shrove Tuesday), the
restaurants are full and
everybody is disguised.



As far as we are concerned, we wore
are costumes in the cave and we are
now happy to wear our clean clothes.

40 – Palermo



The Casa Riccio House is a very nice place !

41 – Grotta Zubbia Camilleri

The Zubbia Camilleri Cave is located near Cattolica Eraclea.



Cattolica Eraclea

42 – Grotta Zubbia Camilleri

This cave, called « Zubbia Camilleri », is a Gypsum Cave.



It's an epigenic cave, with sinkhole and outlet (resurgence) located about 4 km to the east of Cattolica Eraclea (AG).

43 – Grotta Zubbia Camilleri



Block of
gypsum



The plan is to enter by the sinkhole
and to exit by the resurgence.

44 – Grotta Zubbia Camilleri

It's a wet cave...



45 – Grotta Zubbia Camilleri

Sometimes we have to crawl into muddy passages in order to admire very nice walls of Messinian Gypsum.



46 – Grotta Zubbia Camilleri

We can observe different types of cristallization of gypsum in the walls.



47 – Palermo

The port of Palermo from the
terrace of our hotel.



1-3-2017

« Palermo by night »

48 – Trip Palermo-Siracusa

Priolo Gargallo

We cross Sicily (Palermo-Enna-Catania-Priolo Gargallo) and move to the Masseria Scrivilleri boarding house near Siracusa.



49 – Etna

The Etna Volcano is smoking, but it doesn't seem to worry anyone.



50 – Siracusa

The Siracusa zone has been uplifted ; we can see a very nice landscape: on the left, the Etna Volcano and on the right the Augusta Industrial Port.



2-3-2017

In the distance, the Etna Volcano and the Port of Augusta.

51 – Siracusa

In the « Riserva naturale integrale Grotta Palombara », we can see different small cliffs. Those cliffs are ancient shore lines.



2-3-2017

In this region of Siracusa, the old coast lines have been conserved by the uplift.

52 – Grotta Monello



The grotta Monello is accomodated for tourism but this cave never received tourists...



The deep part of the cave conserves interesting shapes and deposits.

53 – Grotta Monello



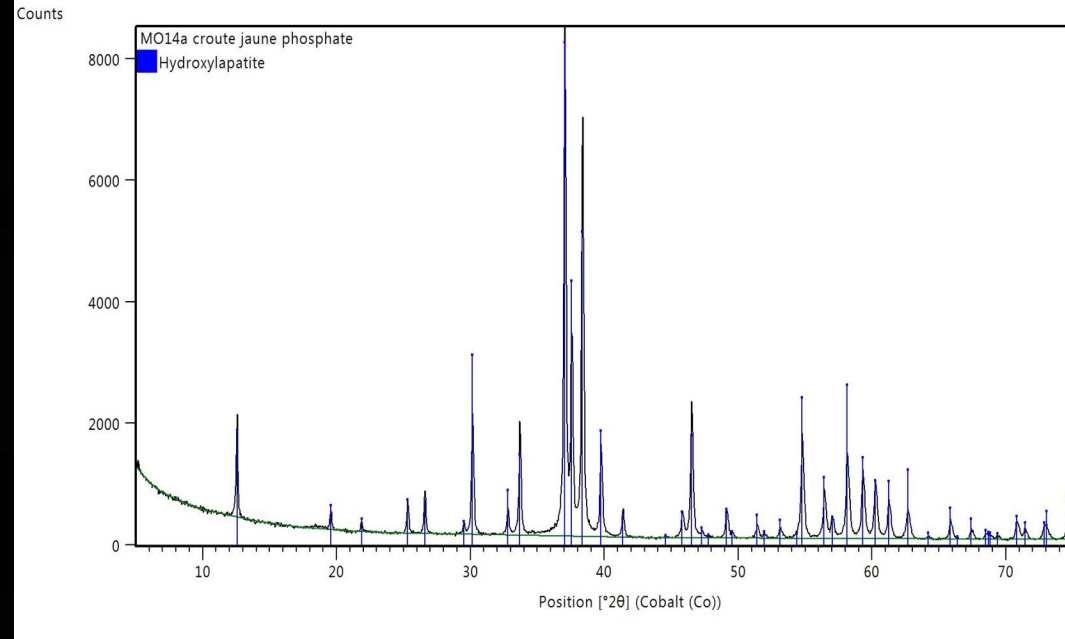
In the deep part, there are « bubble trails », which are the bubble gas route carved in the rock.

This cave has been occupied by bat swarms. There are many clues of their presence: corrosion of blocks and phosphate crusts.



54 – Grotta Monello

The crust sample (guano) is indeed a hydroxylapatite mineral.



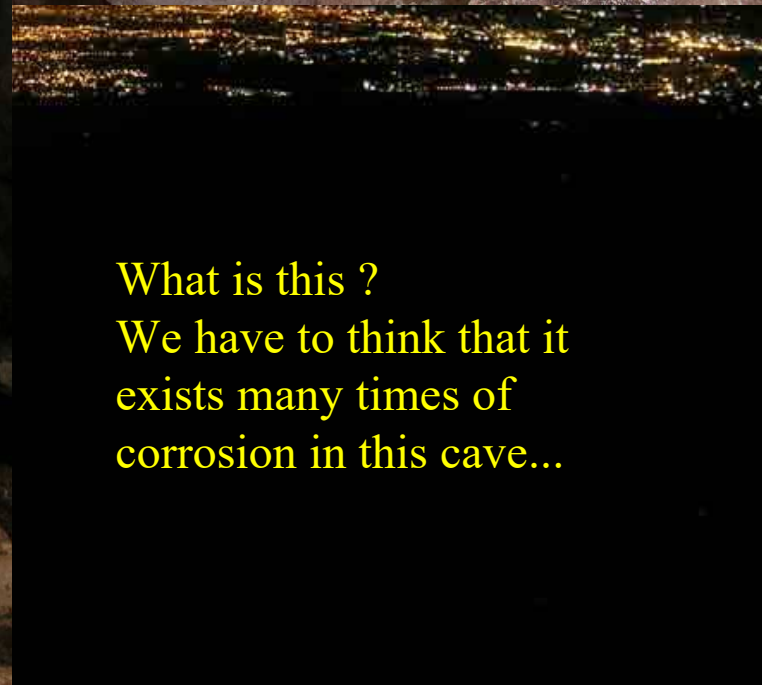
... Which is very logical because of the phosphoric acid attack the guano made on the rock.

55 – Grotta Monello

There is a strange thing, we can see flowstone or thick layer of calcite in alcove of rock wall covered by laminated clay deposits.



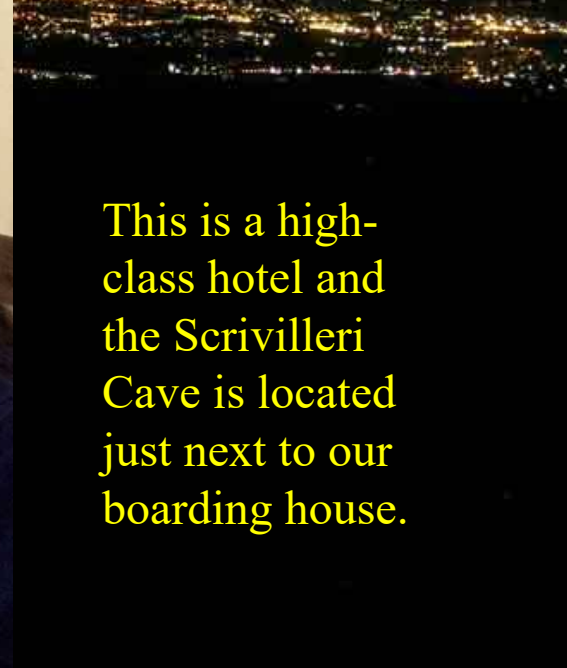
2-3-2017



What is this ?
We have to think that it exists many times of corrosion in this cave...

56 – Masseria Scrivilleri

The Masseria Scrivilleri is a very good boarding house for the cavers.



This is a high-class hotel and the Scrivilleri Cave is located just next to our boarding house.

57 – Masseria Scrivilleri

Our boarding house is a very nice and charming residence...



Very appreciated by Sicilians.

58 – Grotta Scrivilleri

Thankfully, there are a few places where we can stand up...



Hard to catch one's breath in such a cave...

59 – Grotta Scrivilleri

However, it exists a few places
where you can turn back...



Mostly
collapsed rooms
due to boulder
shock.

60 – Grotta Scrivilleri

No, it isn't a remake of
« Marvelous Lamp of
Aladdin »...



The flash was put in a
« feeder » feeding the cave.

61 – Grotta Scrivilleri



At the end of the day, some of us are already out, while some others just came out from the pit (the square structure on the right of the picture, covered by vegetation).

62 – Grotta Scrivilleri

The must for
Marjan:
drinking a
fresh beer.



64 – Masseria Scrivilleri

There is a huge stone quarry near the Scrivilleri Cave.



3-3-2017

In the distance, the Etna Volcano is smoking and we have a crazy idea: going for a stroll.

64 – Etna by night

This smoking volcano (3300 m) is very attractive and pulls us like a magnet...



We were climbing to the summit by night, but we gave up by 2000 meters high: it was 2:00 am. We could see Catania City and the ports of the east-coast of Sicily.

65 – Back to Palermo

Acqua Mintina

Etna volcanic formations

We leave the vicinity of Siracusa et go back to Palermo.

On the road, we stop in the center of the island in order to visit the last caves of our trip: caves of Acqua Mintina.



66 – *Acqua Mintina*

The last caves we're visiting are dry caves located in a flat landscape covered by olive and almond trees. We have time. Nobody is waiting for us.



67 – Acqua Mintina

Mintina means: sulfured.



4-3-2017

We are in the vicinity of Riesi Village and the layers of limestones aren't very thick.

68 – *Acqua Mintina*

The conduits are narrow and we have to squeeze into the rock.



The roof is covered by crystals of gypsum.

69 – *Acqua Mintina*



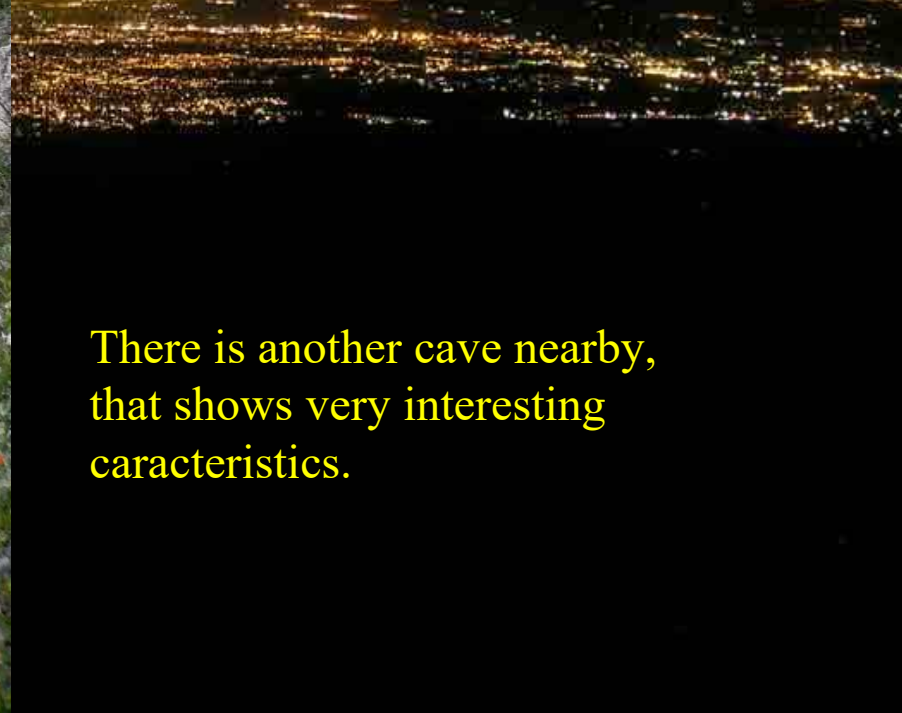
Marco Vattano takes advantage of models and to take a few pictures.

70 – Acqua Mintina



Crystals of gypsum.

71 – Acqua Mintina



There is another cave nearby,
that shows very interesting
characteristics.

72 – *Acqua Mintina*

This cave has been used, there is a low wall (30 cm high). This wall surrounds an ancient pool...

To take a bath for sure.

We believe that the water of this pool was supplied by the farm at the summit of the hill.



4-3-2017

We infer it from the old pile of bridge (aqueduct) built in the middle of the ravine.

73 – *Acqua Mintina*

On the walls, there are crusts of sulfur.
This formation is modern. The sulfur
is made by the oxidization of pyrites
included in a black marls layer.



A yellow layer of sulfur
covers the walls.

74 – *Acqua Mintina*

The conduits of this cave were enlarged, the stones put aside. Today, they are covered by a crust of sulfur which makes us think this is an actual phenomenon.



75 – The end

Palermo



5-3-2017

THE END