Figure 1: Etna's summit craters seen Barbagallo craters - ph. G. Priolo

DATES

The 19TH International Symposium on Vulcanospeleology (ISV) will be held in Catania, on the island of Sicily in Italy from Saturday August 29 to Saturday September 5, 2020.

LOCATION

The 19th ISV will take place in the prestigious setting of the University of Catania, in the centre of the city. The town is only 35 kilometres from the top of Mt. Etna. The big draw for cavers will be the lava tubes, numbering over 300, on Mt. Etna. This mountain is a composite strato-volcano that reaches 3.325 m a.s.l. Its pyroducts cover a large area (8100 hectares/ 20,000 acres).

ORGANIZING TEAM

The symposium will be organized jointly by Gruppo Grotte Catania (GGC) and University of Catania. The GGC caving group is affiliated with the Catania section of the Club Alpino Italiano (CAI). The University of Catania[1] is one of the oldest in Italy.

[1] Founded in 1434 AD

INTRODUCTION

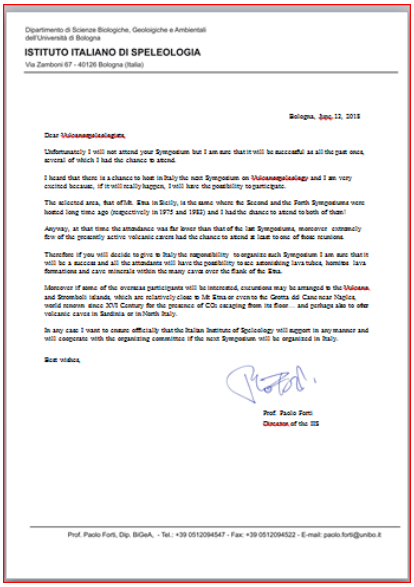
Letter from Paolo Forti to the President of the UIS Commission before the IVS18

Dear Vulcanospeleologists,

Unfortunately, I will not attend your Symposium (IVS18 Lava Beds California) but I am sure that it will be successful as all the past ones, several of which I had the chance to attend. I heard that there is a chance to host in Italy the next Symposium on Vulcanospeleology and I am very excited because, if it will really happen, I will have the possibility to participate.
… if you will decide to give to Italy the responsibility to organize such Symposium I am sure that it will be a success and all the attendants will have the possibility to see astonishing lava tubes, hornitos lava formations and cave minerals within the many caves over the flank of the Etna.
… I want to ensure officially that the Italian Institute of Speleology will support in any manner and will cooperate with the organizing committee if the next Symposium will be organized in Italy.

Best wishes,

Prof. Paolo Forti
Director of the IIS



Dipartimento di Scienze Biologiche, Geologiche e Ambientali
dell'Università di Bologna

ISTITUTO ITALIANO DI SPELEOLOGIA

Via Zamboni 67 - 40126 Bologna (Italia)

Bologna, Sept. 12, 2018

Dear Vulcanospeleologists,

Unfortunately I will not attend your Symposium but I am sure that it will be successful as all the past ones, several of which I had the chance to attend.

I heard that there is a chance to host in Italy the next Symposium on Vulcanospeleology and I am very excited because, if it will really happen, I will have the possibility to participate.

The selected area, that of Mt. Etna in Sicily, is the same where the Second and the Forth Symposiums were hosted long time ago (respectively in 1972 and 1982) and I had the chance to attend to both of them!

Anyway, at that time the attendance was far lower than that of the last Symposiums, moreover extremely few of the presently active volcanic cavers had the chance to attend at least to one of those reunions.

Therefore if you will decide to give to Italy the responsibility to organize such Symposium I am sure that it will be a success and all the attendants will have the possibility to see astonishing lava tubes, hornitos lava formations and cave minerals within the many caves over the flank of the Etna.

Moreover if some of the overseas participants will be interested, excursions may be arranged to the Vulcano and Stromboli islands, which are relatively close to Mt Etna or events for Grotta del Cane near Naples, world renown since XVI Century for the presence of CO_2 escaping from its floor… and perhaps also to other volcanic caves in Sardinia or in North Italy.

In any case I want to ensure officially that the Italian Institute of Speleology will support in any manner and will cooperate with the organizing committee if the next Symposium will be organized in Italy.

Best wishes,

Prof. Paolo Forti
Director of the IIS

Prof. Paolo Forti, Dip. BiGeA, - Tel.: +39 0512094547 - Fax: +39 0512094522 - E-mail: paolo.forti@unibo.it

Dear Caving Friends,
I am pleased to invite you to the 19th International Symposium on Vulcanospeleology which will take place near one of the highest and most active volcanoes in Europe, Mount Etna.
On June 21st, 2013, UNESCO included Mount Etna in the list of world heritage sites defining it as one of the "most emblematic and active volcanoes in the world". Sicily itself has always been one of the most visited destinations by tourists as it is one of the most beautiful islands of the Mediterranean Sea, rich in varied landscapes, history and typical products. Of the over 14 million visitors a year who come to Sicily, about half of them do not miss an excursion on Mount Etna.
The volcano, more than 500 thousand years old, born from the sea and developed in height, owes its charm to its continuous eruptive activity that, from the historical eruptions and the lava flows that overlapped one on another over the years, today attracts thousands of tourists who enjoy the view of spectacular fountains and fireworks.
For you we are planning guided tours to admire the pillows and columnar basalts, evidence of the first eruptions of our volcano, the very famous Bove valley, a large basin 1km deep and 5km wide, the result of an ancient depression of the volcano and, finally, both lava flow caves and fracture caves.
More than 300 volcanic caves are known on Mount Etna and our speleological group, Gruppo Grotte Catania, within the Italian Alpine Club section of Catania, has more than 80 years of experience in the area, spent in exploring and cataloguing all the Etna caves.
In the past, our group organized the second symposium back in 1975, but with great pleasure I wanted to dedicate myself to organizing a new symposium to offer all members of the group a new chance to participate, sharing our latest research and thus giving the opportunity to all the participants to enjoy the beauties offered by the Etnean landscape.
Furthermore, coming to Sicily, you will be able to admire also the Baroque architecture of Catania and the different architectural works as proof of the populations who conquered Sicily over the centuries (Greeks, Romans, Arabs, Normans).
Hoping to see you all in Catania.

Dr Carmelo Bucolo, Chairman, Gruppo Grotte Catania

SYMPOSIUM PROGRAM

SATURDAY AUGUST 29TH

All day Minibus from the airport to registration desk and hotels,
WNS decontamination procedures (GGC Headquarters).
Afternoon **Opening of the exhibition**: "MONGIBEDDU COLOURS AND FLAVOURS"

SUNDAY AUGUST 30TH

PRE-SYMPOSIUM EXCURSION [2]: GEOLOGY OF MT. ETNA an overview of the volcano guided by a geologist, with comments at the most significant points (all day).

All day Minibus from the airport to registration desk and hotels,
WNS decontamination procedures (GGC Headquarters).
Evening **Visit of the exhibition**: "MONGIBEDDU COLOURS AND FLAVOURS"
Welcome party (GGC headquarters)

MONDAY AUGUST 31ST

Morning **Opening ceremony and beginning of work sessions** - coffee break incl.
(University of Catania – Geological Faculty)
Afternoon **Catania's natural and cultural heritage** (guided short trips)
Mt. Etna selected caves [2] (short caving trips)
Evening **Recent discoveries** video or slide presentations (GGC Headquarters)

TUESDAY SEPTEMBER 1ST

Morning **Lectures and work sessions** - coffee break incl.
(University of Catania – Geological Faculty)
Afternoon **Catania's natural and cultural heritage** (guided short trips)
Mt. Etna selected caves [2] (short caving trips)
Evening **Participants video or slide** contributes (GGC Headquarters)
Partners' Program [2]–**Taormina and Alcantara Gorges** guided tour

WEDNESDAY SEPTEMBER 2ND

Morning **Lectures and conclusion of work sessions** - coffee break incl.
(University of Catania – Geological Faculty)
Afternoon **Catania's natural and cultural heritage** (guided short trips)
Mt. Etna selected caves [2] (short caving trips)
Evening **Gala Banquet** in a typical Sicilian restaurant
Partners' Program [2] – **Syracuse and Noto** guided tour

[2] Extra fee required

THURSDAY SEPTEMBER 3RD

GENERAL EXCURSION - Visit of the **summit craters** or the "**Valle del Bove**" depending on the volcano activity. (All day - for all participants).

Evening **musical event** with a folk group (GGC Headquarters)

FRIDAY SEPTEMBER 4TH

SPECIAL EXCURSION – **Following the 1669 Lava Flow** from Monti Rossi craters to the seaside of Catania, including a special caving trip to **Grotta delle Palombe**

Evening **Closing ceremony** and **Farewell party** (GGC Headquarters)

SATURDAY SEPTEMBER 5Th

POST SYMPOSIUM EXCURSIONS.

More details on Post symposium excursion will be given on the next Circular.

All day – transport by minibus of the participants to the airport or the station.

GETTING THERE

In general, the best way to reach Catania is by plane. Catania–Fontanarossa Airport is the closest airport to Catania and among the busiest airports in Italy. Major airlines such as Alitalia, Lufthansa, KLM and Air Berlin offer services here and connect numerous European big cities, while low-cost airlines such as EasyJet and Ryanair offer extensive flights from many destinations.

If you want to reach Catania by bus from other cities in Italy and European countries, you can check Flixbus website.

If you want to reach Catania by train from other cities in Italy and European countries, you can check Trenitalia website.

If you like boats, you can reach Catania by ferry from Naples and Malta. We can send more information if you are interested.

LODGING

Unfortunately, Catania is a very expensive town for lodging, especially during summer as it is high season for tourism. Because of the great variety of possibilities offered by in the town, lodging is not included in the Symposium fee and you can choose your preferred solution using for example, “booking.com”.

However, the organizing team has made a big effort to arrange for special prices for the participants to this Symposium.
Essentially there will be three options:

- hotel near the Centre of the Town or along the seaside, where a double room costs from 70 to 95 euro/night, breakfast included
- a university campus that also offers special prices for lunch and dinner where a double room costs about 60 euro/night, breakfast included
- a camping site with the possibility to camp or rent a bungalow (4 beds) for 27 euro/night per person, breakfast included

More information on the arrangements will be provided in the next circular (Autumn 2019). You’ll have to book as soon as the details come out, using a special booking form, to get these prices.

MEALS

With the exceptions of the Welcome Party, the Gala Banquet and the Farewell Party, meals are not included in the Symposium fee.
Catania offers a large variety of restaurants, “trattorie” and bars able to satisfy the most demanding cavers and scientists. During the three days of lectures, a lunch deal with a restaurant near the University will be proposed to participants. There will be also a deal for dinner in hotel restaurant, near the GGC headquarters, throughout the Symposium week.

Lunch is included in the excursions outside Catania (partners’ program).
A packed lunch is included in the general excursion to Mt. Etna.
A special taste of Sicilian cakes is included in the 1669 excursion.

REGISTRATION

The **registration procedure will be available on-line**, on the Symposium website, by Autumn 2019. It is already possible to pre-register free to get priority to attend to the Symposium in case registration requests exceed the maxiumum limit.

Registration fee is fixed at Euro 290,00 and includes:

- 19th ISV booklet
- Transport from and to the airport
- Welcome Party
- Morning lectures at the University of Catania
- Catania's natural and cultural heritage [3]
- Evening programs at GGC Headquarters
- Gala Banquet
- Farewell Party
- Cave rescue Insurance
- General excursion to Mt. Etna
- Special 1669 excursion
- Proceedings of the Symposium (on paper book or USB key)

For accompanying members, the fee is reduced to Euro 250,00, not including the proceedings book.

To encourage student's participation to the lectures, the organizing team decided to create a special pass, valid only from Monday to Wednesday. This special student pass cost Euro 30,00 and includes:

- 19th ISV booklet
- Morning lectures at the University of Catania
- Evening programs at GGC Headquarters
- Proceedings of the Symposium (on USB key)

Due to logistic problems, the organizers have set the limit at **80 attendees** (including accompanying members) but excluding student passes.

[3] an extra fee might be required for some excursions

WHITE-NOSE SYNDROME

White-nose syndrome is a disease that is killing hibernating bats in eastern North America. WNS was first documented at four sites in eastern New York 2007. After that, photographs taken in February 2006 were found, showing affected bats at another site. Named for the white fungus on the muzzles and wings of affected bats, WNS has rapidly spread to many sites throughout United States and Canada. Researchers associate WNS with the newly identified fungus, *Pseudogymnoascus destructans*, which thrives in cold and humid conditions characteristic of caves and mines used by bats. Bats affected with WNS do not always have obvious fungal growth, but they may behave strangely within and outside of their hibernacula (caves and mines where bats hibernate during the winter).
There is no evidence of WNS in the Mt. Etna area so far but do not bring cave gear to this area that has been used in a place where WNS has been identified, even if that gear has been decontaminated.
Decontaminate your gear if it has been used in areas where WNS has not been identified. Please go to whitenosesyndrome.org for the latest up to date recommendations for gear decontamination.

The organizing team will give you the opportunity to decontaminate your gear and garments for free on Saturday 29Th and Sunday 30TH at the Gruppo Grotte Catania Headquarters.

For those who came from abroad, the organizing team will have a small number of basic caving equipment sets for rent (helmet, light). Please, ask for this opportunity while registering.

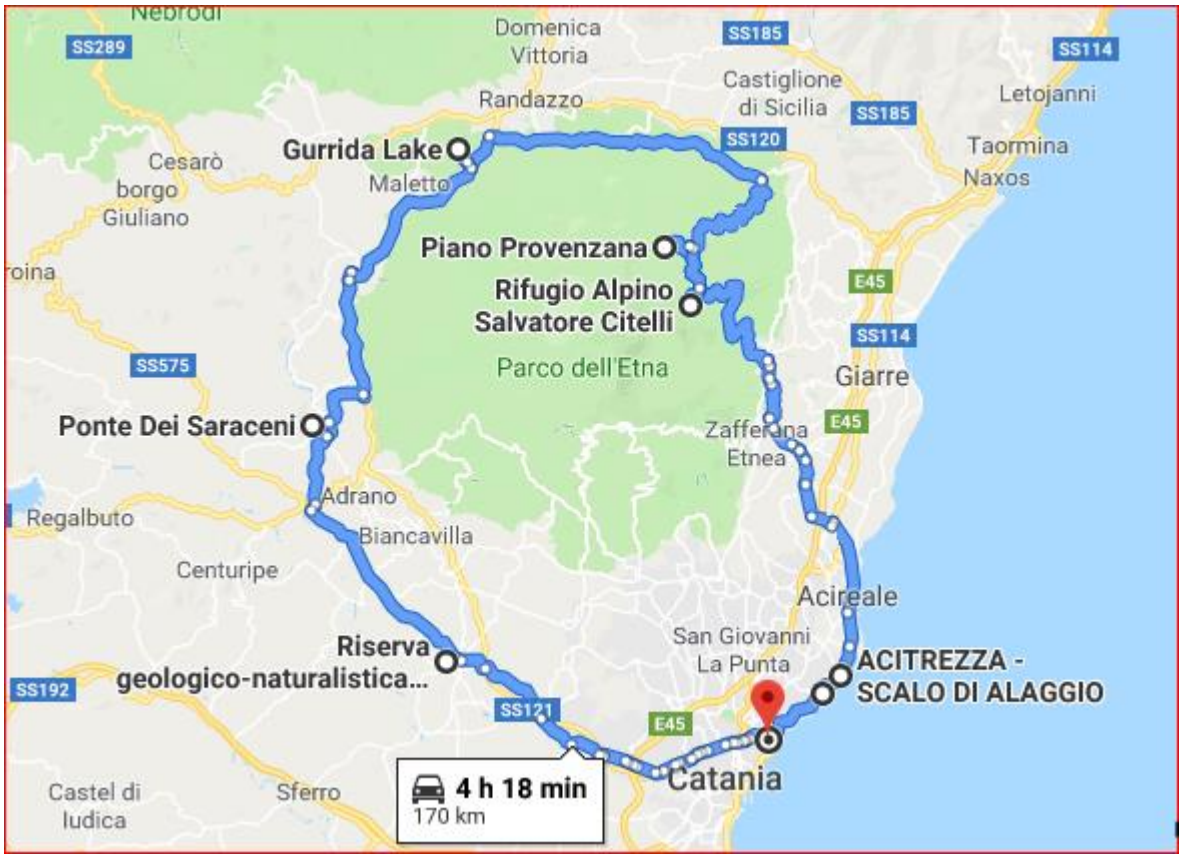
EXCURSIONS

PRE-SYMPOSIUM

A) GEOLOGICAL TOUR OF MT. ETNA

The purpose of this excursion is to provide participants with a first geographical and geological overview of the Etna volcano. The excursion will be led by the senior geologist Dr. Giuseppe Priolo and will last a whole day.
A circular tour is planned on the mountain slopes (see following map), stopping at the most significant points in the history of volcano eruptions.
Lunch is included in a typical mountain lodge; return on time to attend the welcome party.

Cost of the excursion: euro 40,00 Limit: 16



DURING THE SYMPOSIUM

B) GENERAL EXCURSION

Mt. Etna is an active volcano. From the summit craters there is often the emission of gasses and steam. During periods of high activity, the hike to the craters is strictly forbidden. Thus, the organizers will be able to confirm the destination of this excursion only during the Symposium.
If the volcano is quiet, our goal will be to take all participants as high as possible on the volcano, towards the summit craters.
The idea is to reach the highest parking place, by 4x4 minibuses, at 2.700 m a.s.l. From that point, there is a two hour walk on cinder and unconsolidated lava to reach the summit of the north east crater at 3.350 m a.s.l. In this excursion you will see many volcanic features and the fantastic panorama from the top of the mountain.
This part of the excursion will be led by the rangers of the Etna Park.
It requires good health and to be trained for long walks. Sack lunch and drinks included.

C) ALTERNATIVE GENERAL EXCURSION

This excursion is an alternative program in case that the activity of the volcano doesn't permit the ascent to the craters.
The participants will reach the parking place near "case Pirao" at 1.850 m a.s.l. by bus. From that place a long and winding track named "Sentiero della Schiena dell'Asino" will lead us to a panoramic point at 2.050 m a.s.l. Where there is the possibility to see the inside of the depression whose name is "Valle del Bove". This depression is famous because most of the lava flows coming from upper craters, stop there.
From the panoramic point it is possible to see the most spectacular features of the valley: hornitos, lava bridges, columnar basalt, etc.
Requires: good health and good shoes.
Packed lunch and drinks included.

D) FOLLOWING THE 1669 FLOW

This excursion is designed to show the path followed by the biggest lava flow that reached the town 350 years ago.
In the morning a bus will take all participants to the erupting cones of that flow whose name is "I Monti Rossi" at 750 m. a.s.l. There will be an explanation of the highlights of the event starting from the description as were given by the witnesses of that time.
In the afternoon the excursion will follow the path of the lava, visiting the town of Nicolosi and then reaching the centre of Catania. There will be some stops near monuments that were left untouched by the lava flow.
This excursion will end at the seaside, at the edge of the area, more than 2 square kilometres, that was added to the land with that flow. A sweet lunch is included at the typical restaurant attached to the *Condorelli* confectionery factory.

For those who wish, there will be the possibility to descend the first pit of the crater in order to have a quick look inside. This is vertical cave and caving equipment is needed.

E) CAVING TRIPS

More than 300 volcanic caves are known on Mount Etna, scattered on the slopes of the mountain, from the upper part of the volcanic cones, to the dark beaches of the seaside.
The caves of the upper part of the volcano are generally very far from the roads or located in dangerous areas because of the volcano activity. Moreover, the highest part of the volcano is included in the area of the Park of Etna and the access is subjected to restrictions due to the dangerousness of the volcano itself.
It is therefore not possible to plan the visit of the highest caves of the Etna in a half-day excursion during the period of the symposium.
For the days of the Symposium, the organizing team has selected some caves, very representative of Mt Etna caves features, so close to the town to permit the visit them in a short caving trip, from afternoon to the evening. Due to their beauty and importance, the organizing team particularly has selected the caves “GROTTA DEI 3 LIVELLI” and “GROTTA KTM”. Since they have small internal jumps to overcome, the organizers will set up ladders to allow all participants to visit them.
In addition, other easy-to-walk cavities have been selected for the excursions during the symposium period. You can find below a non-exhaustive list of them, with the description of each cave. More caves will be added in the future.
Finally, near the town of Catania there is an area in which some simple caves have been prepared for a didactical tour (Grotte di San Gregorio). The access to that area is possible to all participants and is included in the cultural heritage program.
More details on all scheduled excursions will be published in the second circular; the organizers will be happy to answer any other questions you may have about speleology in the area of Catania.

Here is a short description of the selected caves:

a) GROTTA DEI 3 LIVELLI

This is an inclined tunnel formed in the lavas that flowed from the lower effusive mouth of the 1792 eruption. Overall, the cave is very well preserved and there are few places where collapses occurred. At the entrances, the cavity is divided into three superimposed galleries located at three different levels. The upper tunnel, 60 m long, is rather narrow and a part of the ceiling consists of a reinforced concrete slab that supports the provincial road. The intermediate tunnel is about 40 m long. Greater development presents the lower gallery which is more than 400 m long. The three levels are connected by small jumps to overcome which a 10 m ladder is useful. For the first 50 m from the base of the wells the route is very easy given the height of the vault that only forces you to bend down in some places. The floor is of lava with a slag surface in large fragments, which have a characteristic wavy surface in the southern ends of the

tunnel. Throughout the cave it is possible to observe remelted stalactites that appear as shreds of lava with a glass surface and interesting protrusions, similar to cornices, arranged along the walls. The cavity is visited by many bats.

Figure 2: Tre Livelli Cave, from first level to the second – ph. G. I. Sanfilippo

b) GROTTA KTM

The search for a continuation downstream of the lava tube of the Grotta dei Tre Livelli led to the discovery, in 1995, of the KTM cave.
Imposing cavity of 650 m of development and 60 m of elevation gain, which opens just 20 m downstream from the final point of the Grotta dei Tre Livelli.
The two cavities are part of a "system" of inclined tubes which, stretching and overlapping, had to feed the lava fronts of the 1792-93 eruption for a long time.

Figure 3: KTM Cave - ph. G. Priolo

c) GROTTA DELLE PALOMBE

A pit 8 m deep gives access to a first room of the size of 5 m by 15. At the bottom of this room there is a 3 m deep well that leads to a 15 m long steep slope that ends in a smaller room than the previous above a 17 m deep well. From the base of this pit you can follow the eruptive fracture for about 60 m southwards. This is well preserved in some sections and has a uniform glazed lining on the walls, formed during the eruption. Elsewhere the walls of the fracture collapsed and the material behind them collapsed inside the cavity in chaotic masses of large blocks or in heaps of small stones. Following these phenomena, the cavity has several enlargements. Continue through a passage located 6 m high, reachable by a ladder that can be fixed to a rocky outcrop. This opening leads to a section of the cavity where the walls are intact and a couple of metres apart. A little further on we note a collapse of the western wall. The consequence of the collapse is the formation of a room at a higher level. To reach the front of the collapsed material requires climbing a jump of 6 m on unstable blocks. From the room, a steep slope of loose material can be followed for 25 m. Subsequently, it is still possible to follow the fracture for 75 m, which is again intact and gradually shrinking until it becomes blocked. The floor here is made up of lava with a fragmented scoriaceous surface. In the terminal part of the cave the eruptive fracture is on two different levels. In the lower one there are at some points accumulations of fine volcanic sand; it is also possible to observe curled sheets of lava with the formation of rolls. In many places, slabs have detached from the walls and clutter the passage.

Figure 4: Palombe Cave, a lava roll - ph. B. Scammacca

d) GROTTA INTRALEO

The cave consists of a set of lava flow galleries of various sizes located at different levels and variously oriented. Near the entrance of the northeast gallery there is a small altar. This gallery is about 40 m long. On the opposite side there are three overlapping galleries. The upper gallery is 13 m long. The lower one is about 30 m long; it begins with a slope of large boulders that ends in a large room, several meters high, where you can observe two large lava rolls, among the largest known to us, and numerous large sheets protruding from the walls. The intermediate cavity is the longest of the three branches and begins with a tunnel about 30 m long, over 2 m high, with a flat floor on which two rolls can be seen, smaller than the previous ones but longer. Further on, this gallery is divided into three branches located at different heights. The eastern branch, at a lower altitude, is very short and has an accentuated slope, the central branch is 50 m long and its ceiling is low, so that it is necessary to crawl here and there; in some places it presents domes where it is possible to stand; the floor of this gallery is flat and consists of slag partly welded and partly movable. The third branch has the same configuration of the previous one; in this branch a wedge-shaped boulder, detached from the ceiling, almost completely obstructs the passage, about halfway. The three branches end up with the ceiling and the floor joining together.

Figure 5: Intralio Cave, the biggest lava tube - ph. G. Priolo

e) GROTTE GALLO BIANCO

The Gallo Bianco caves are located in the township of Adrano. To reach them, you have to walk up a long lava canyon until you reach an impressive lava arch, which is what remains of a large collapsed lava tube. Further on, along the canyon, two lava tubes can be seen. These are lava flow caves, 60 meters long, with a marked slope. Both end after a narrow passage that brings to a slightly larger hall.

f) GROTTA BURRO'

This is a large lava tube cave, 250 meters long with a difference of 47 meters between the highest and the lowest point. The entrance is located inside a large depression in which two large holm oaks have grown. The initial part of the cave presents many collapses on the floor whereas, in the final stretch, there are many puddles of water and mud. In the middle part of the cavity a large lamina detached from one of the walls and, leaning against the opposite side, produced some sort of elevated room. About 30 meters further down, a rock pillar separates the tunnel into 2 small parallel tunnels. The cave has a large colony of bats of different species.

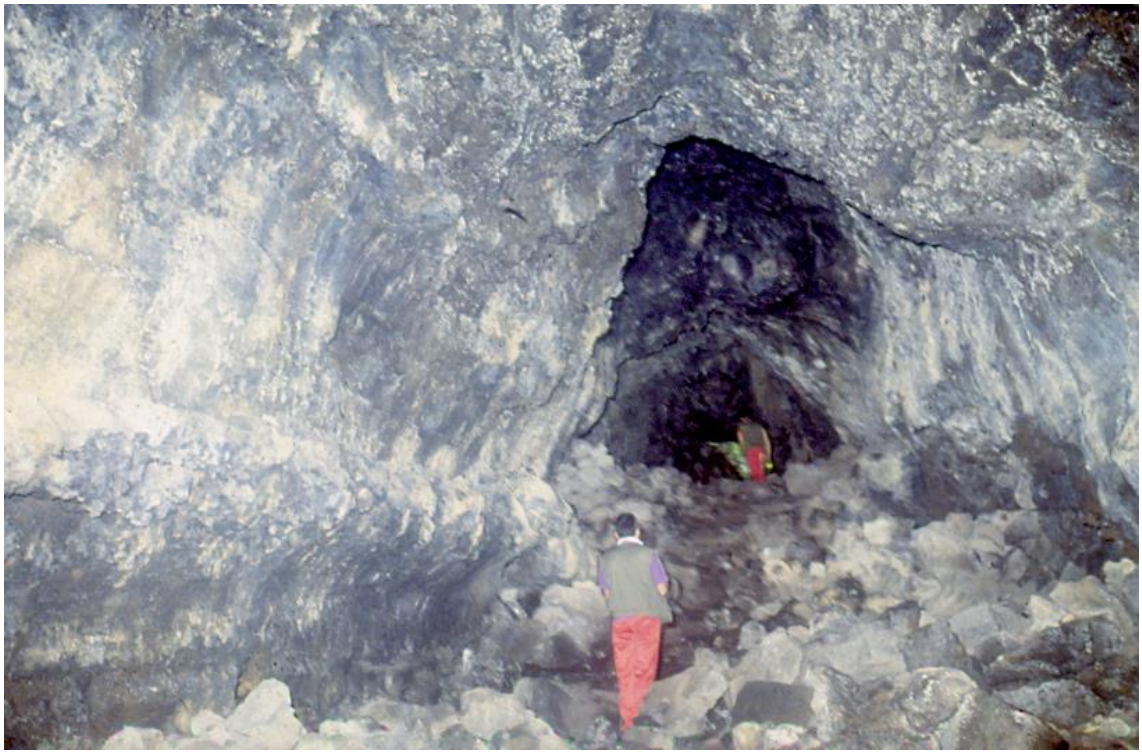


Figure 6: Burrò Cave - ph. B. Scammacca

g) GROTTA MICIO CONTI

This cave is located in the natural reserve of the "Immacolatelle and Micio Conti Complex". This complex is also known as "Grotte di San Gregorio". It consists of a system of nine volcanic cavities within a lava field of morphology similar to that of the Hawaiian caves. In the Immacolatelle caves, two collapses divided a single lava tunnel into separate parts, giving rise to a complex of four caves. Inside the caves there are interesting morphologies: in the Micio Conti cave, the lava flow has left linings on the walls and small refusion stalactites on the ceiling.

Figure 7: Micio Conti Cave - ph. G. Priolo

h) GROTTA AMPUDDA DU PISCITEDDU E DEI TADDARITI

These caves are lava flow tunnels dating back to the famous eruption of 1669 that destroyed many small villages and reached the town of Catania.
The entrances of the caves are skylight windows caused by collapses of the lava tube vault. Inside both cavities it is possible to observe flow linings and re-melting stalactites.
At the end of the tunnel, the Ampudda du Pisciteddu cave has a small wooden door, placed laterally to the tunnel. From this door the citizens of Catania

entered the cave during the World War II because this cave was used as a shelter from the Anglo-American bombings.
The origin of the name of the Taddariti cave derives from the presence of a large colony of bats that, in the past, lived inside the cave. In Sicilian dialect they are called "taddariti". Today, unfortunately, only a few isolated specimens have remained of the large bat colony due to the disturbance caused by external works.

Figure 8a: Ampudda di Pisciteddu Cave- ph. G. Priolo

Figure 8b: Taddariti II Cave, the skylight - ph. G. Priolo

i) GROTTE CATANESE

These two caves are in the township of Ragalna.

The first one is a lava tube characterized by a room that is among the largest known on Mt. Etna. Passing the entrance, you descend on large collapsed blocks and you immediately find yourself in a vast bell-shaped environment. The floor, at the lowest point of the room, is of earth mixed with stones and plant debris. On the south side it rises abruptly until it forms the back wall of the room; the lava appears here with a united surface with the formation of ropes and edges. It is easy to climb up this wall until you reach a characteristic hollow almost at the height of the ceiling, from which you dominate the environment. On all walls you can observe a great number of small protruding sheets; on the west side near the entrance there are any shallow grooves, parallel to each other, which abruptly change direction bending downwards at an angle of 140 °. At the foot of the wall, on the south side, the lava formed large blocks that might seem collapsed, but which actually are huge irregularly crumpled sheets. From this first large room the cave continues, through a narrow passage at the base of the east wall, with a tunnel about 70 m long. Some bones, presumably

human, and many small ceramic fragments were found in this gallery. Numerous bats of the genera Myotis and Rhinolophus still inhabit the cavity.

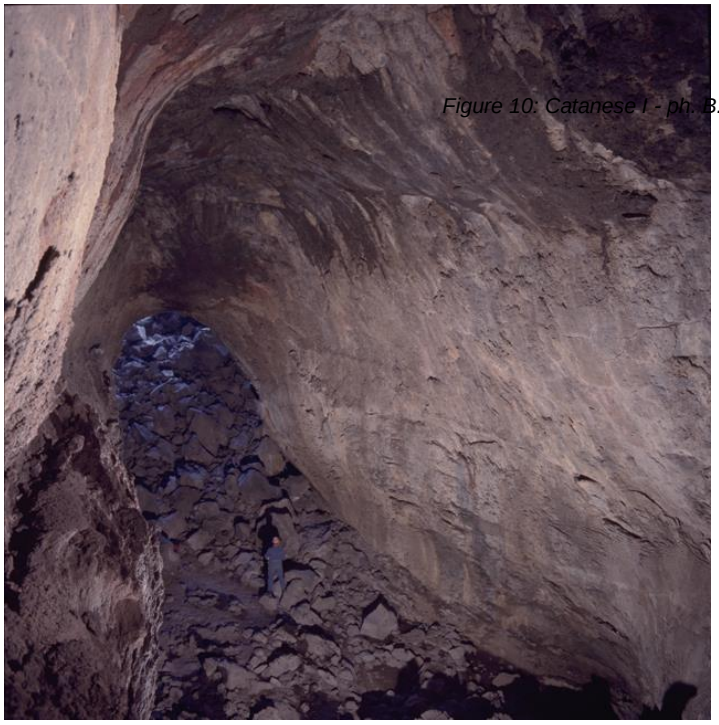


Figure 9: Catanese I Cave - ph. B. Scammacca

Figure 10: Catanese I - ph. B. Scammacca

The second cave consists of a single tunnel just over 20 m long. You enter by descending on a chaotic mass of collapsed blocks. The floor, after the first section, appears flat with beaten earth and stones; towards the bottom it is possible to observe lava with a joint surface. On the walls there are numerous sheets of lava of different thickness and folded in various ways. The section of the cave has a characteristic pointed arch shape, but not symmetrical as is normally observed in other cavities. The southwest wall is overhanging while the northeast is an inclined plane on which it is easy to climb.

Figure 10: Catanese II, a lava roll - ph. G. I. Sanfilippo

F) CATANIA'S NATURAL AND CULTURAL HERITAGE

Catania was founded in the 8th century BC by Chalcidians, a Greek population coming from Thrace. In 1434, the first university in Sicily was founded in the city. In the 14th century and into the Renaissance period, Catania was one of Italy's most important cultural, artistic and political centres.

The city is well known for its history, culture, architecture and gastronomy. Its old town, besides being one of the biggest examples of baroque architecture in Italy, is a World Heritage Site, protected by UNESCO.

During the 3 days of the symposium, in the afternoon, after the morning lectures, short trips will be planned to visit relevant artistic or scenic places. Organizers selected some places that are connected with the volcanic features of its territory.

At the moment the following visits are planned:

- Walking through the Baroque
  A wonderful walk in the centre of the town.

- Etna's endemic species
  Guided tour of Catania botanical gardens.

- The caves of San Gregorio
  The natural reserve is characterized by the presence of numerous lava flow caves in a relatively small area. The reserve was established in order to "preserve and protect the important complex of lava flow caves colonized by cave fauna and bat colonies".

- The "Paternò mud cones"
  The idea is to go and visit the mud "vulcanelli" near Paternò, including also a stop at a winery to taste the famous wines of Etna.

- Boat trip from Aci Trezza to the Coast of Cyclops
  A boat trip from the port of Aci Trezza to go and see the columnar basalts of the faraglioni up close and see the stretch of coast affected by the 1669 flow.

- Living on an active volcano
  Over 150 fixed detection stations (seismic, GPS, infrasonic, clinometric, extensometric, etc.) are installed on the Etna slopes, thus making this volcano one of the best monitored volcanoes in the world. Visit of the "monitoring room" of the INGV (Istituto Nazionale di Geofisica e Vulcanologia) in Catania.

- The beach of San Giovanni li Cuti
  Black sand beach with the possibility to see the front of a lava flow.

Participation on some visits could be limited due to logistic reasons; entrance to museums or monuments is to be paid on site and an extra fee might be required to cover transport outside the town.

Figure 11: Acitrezza port, in background the Lachea island

PARTNER'S PROGRAM

G) MONGIBEDDU COLOURS AND FLAVOURS

On the occasion of the symposium, the organizers decided to invite the best artisans and agricultural producers from the area around Catania to come and present their products at a fair that will be hosted at the headquarters of Gruppo Grotte Catania. The exhibition will be open to general public on Saturday August 29th and Sunday August 30th. Symposium participants can freely visit it on Sunday evening, before the welcome party.

H) TAORMINA AND ALCANTARA GORGES

All day excursion specially organized for accompanying members. Lunch is included.

Taormina is a hill town on the east coast of Sicily. The city is known for the Ancient Theatre of Taormina, an ancient Greek-Roman Theatre still in operation today. Near the theatre, the cliffs that descend to the sea form inlets with sandy beaches. A narrow strip of sand connects to the tiny Isola Bella, which is a nature reserve.

Unique in the Italian and European natural landscape, the Alcantara Gorges are one of the must-see attractions of Sicily. Located about 20 km from Taormina, the gorges are real canyons made of black lava walls up to 50 metres high, in the typical shape of a prism that the rocks have taken during the cooling process. Within the grooves, the toning and crystal and clear waters of the river Alcantara run surrounded by an unspoiled landscape, with rare flora and fauna. The purity of the natural habitat has been facilitated by its hidden position, which has preserved its existence; until the fifties in fact this site was completely unknown. The Alcantara Gorges have by now become a famous attraction even beyond national borders, and it is considered one of the most beautiful and natural sites in Italy.

Cost: 60,00 euro Limit: 50

I) SIRACUSE AND NOTO

All day excursion specially organized for accompanying members. Lunch is included.

Siracuse is a city on the Ionian coast of Sicily. It is known for the ruins of antiquity. The central Archaeological Park of Neapolis encloses the Roman amphitheatre, the Greek Theatre and the Ear of Dionysius, a cave carved into the limestone in the shape of a human ear. The Paolo Orsi Regional Archaeological Museum exhibits terracotta finds, portraits from the Roman period and scenes from the Old Testament carved in white marble.

Noto: This small town in the south-east was founded again in the 1700's. It is the heart and at the same time the starting point for a visit to the valley of the Sicilian Baroque. Its cathedral, also perfectly raised and rebuilt again after 10 years of difficult work, was included in the UNESCO World Heritage Sites.

Piazza Armerina: The villa of the Casale recognized by UNESCO and included in the "World Heritage", with its 3500 square metres of mosaic floors famous throughout the world, hunting lodge of Massimiliano Erculeo, is evidence of life in Roman times ...

Cost: 60,00 euro Limit: 50

POST SYMPOSIUM

J) ISOLE EOLIE

This is the only Post Congress excursion that will be organised by the local section of Club Alpino Italiano and the Gruppo Grotte Catania.
It will start from Catania on Saturday September, 5th.
The idea is to see the main volcanic features on the islands of Vulcano, Lipari and Stromboli.
This excursion needs 4 or 5 days and may end in Naples if it is of interest for a group of attendees. Otherwise the excursion will get back to Milazzo and Catania.
In the excursion fee are included the cost of transportation and accommodation in small hotels with full board.
To organize this excursion a minimum number of 20 participants is needed.
An approximate cost for this excursion is Euro 700,00.

Figure 12: Eolie islands - ph. G. Priolo

OTHER EXCURSIONS

The UIS Commission is contacting other speleological groups working on volcanic areas in Italy, to ask them a collaboration to organize pre or post excursion for the symposium. More information will be given at the next Circular in Fall 2019.

RELATORS

Speakers, wishing to present their work at the symposium, must be registered participants.

Papers and abstracts will be accepted and published only if the author (or at least one of the authors for joint work) has paid the full participant registration fee.

English is the official language of the International Symposium on Vulcanospeleology. Translation services will not be provided.

All papers must be sent, in electronic form, to the Organizing Committee of the ISV19 at the following address:

contact@19isvetna.com

The title of the presentation, the list of authors and their organizations and the abstracts must be communicated by **2019, December 31st**, full paper must be sent by **2020, March 31st**

Authors are kindly invited to keep to the structure indicated in the Papers Structure paragraph.

The organizing team will group the presentations by topics in order to assemble the presentation calendar for the three days of the Symposium.

PAPERS STRUCTURE

TITLE

Author/s Name Surname, e-mail, Institution

Summary in English max: 2500 characters including spaces and punctuation;

Keywords: 3 (English)

Article max 45 000. characters (including captions, tables, spaces, etc.)

the text must be provided in Word format (doc, docx, rtf), without the use of headers, footers, etc.
Any notes must be written at the end of the article clearly indicating in the text where to insert the relative reference putting the number in brackets

eg:
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NOTE 1: Text text text text
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Font, body and line spacing: indifferent, they will be replaced in the layout phase

Images: in colour or in black / white (including cave reliefs and possible maps).
clearly indicate the references within the text and also provide them separately in tif (or jpg) format with at least 300 dpi resolution
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etc. in progressive number

Charts:
as for the other images; also provide a separate version in tif format with at least 300 dpi resolution

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it is also better to provide a separate version in text and pdf format as for the images, clearly indicate the references within the text;
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Quotes:
Within the text in round brackets AUTHOR, YEAR
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Bibliography

SURNAME N. (year) Title, City, Publisher.
eg .:
TUSA S. (1983) Sicily in Prehistory, Palermo, Sellerio

Works by, Articles in Magazines, Acts, ...
SURNAME N. (edited by) (year), Title, City, Publisher
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GRIFONI CREMONESI R. (1995) The caves and their function. Methodological introduction, in Cocchi Genik D. (edited by) The ancient Bronze Age in Italy, Proceedings of the Viareggio Congress, 9-12 January 1995
SAURO F. (2009) Lost Worlds, on the quartzite highlands of Venezuela in «Speleology» 61, 38-47
BERTOLANI M., CIGNA A.A. (1994) Activity of the Scientific Commission of "Great Wind Cave" (Genga, Ancona, Central Italy) in "International Journal of Speleology" 23 (1-2), 51-60

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