



TEN OF THE MOST INTERESTING CAVES ON MOUNT ETNA. CADASTRIAL FILES

Renato Bonaccorso and Roberto Maugeri

Centro Speleologico Etneo, via Cagliari 15 - 95127 Catania, Italy

Abstract

This paper contains the cadastral data of ten of the most interesting caves on Mt. Etna. The choice has been based upon the dimension, shape, geological features, archaeological findings or other peculiar characteristics. Some of them present more than one interesting characteristic like Grotta del Santo chosen for its labyrinthical shape and also important for its archaeological findings; Profondo Nero is an interesting fissure cave, the longest on Mt. Etna. Grotta del Lago chosen for its water deposit that freezes during the winter. Among more than 250 caves being explored on Mt. Etna only Grotta del Gelo, has a water deposit while snow deposits are more common. Grotta dei Tre Livelli is the longest lava tube on Mt. Etna having the biggest difference in level between the top and the bottom. Grotta Catanese I is not very long but a part of it is the biggest lava tube among the Etnean caves. To Grotta Petralia belongs one of the most important archaeological cave site and it is the longest lava tube near the sea level. An example of cave usage in more recent periods is Grotta dei Ladri used as a snow deposit during the summer. For this reason it was modified in order to achieve a better use. Grotta degli Archi is one of the best example of lava tube starting from the base of a crater: a lava channel partially covered and associated with an underneath lava tube. Grotta di Serracozzo instead is one of the best example of a cave starting from a eruptive fissure. Grotta Cutrona had a very interesting secondary mineral deposit with some rare minerals that were formed during the cooling of the cave after its formation. However these minerals were destroyed when the cave became colder and rain water entered inside. Other interesting caves have been excluded since well described in other papers.

Introduction

On Mt. Etna more than 250 lava caves are known, mostly are lava tubes, while the others are eruptive fractures and very few of them created by erosion. All these caves present similar morphological features, but some of them can be selected as representative due to some peculiar characteristics.

The following files are ordered according to the cave length.
Coordinates are given in ED1950.

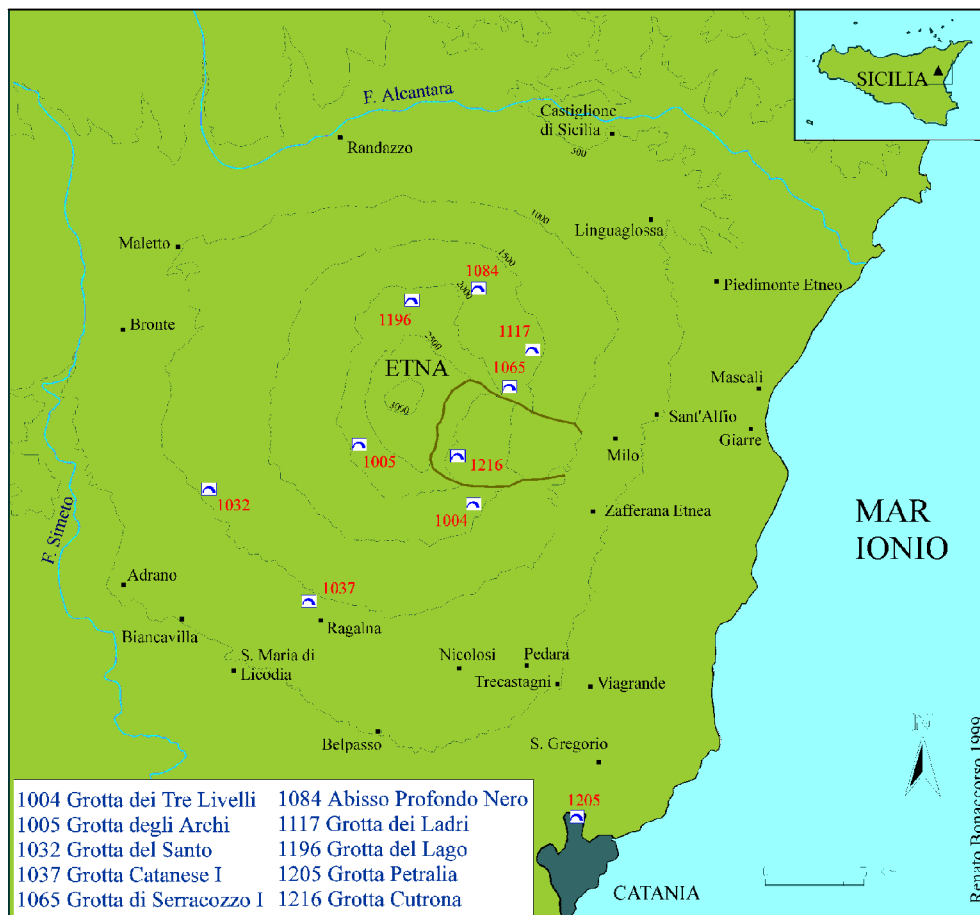
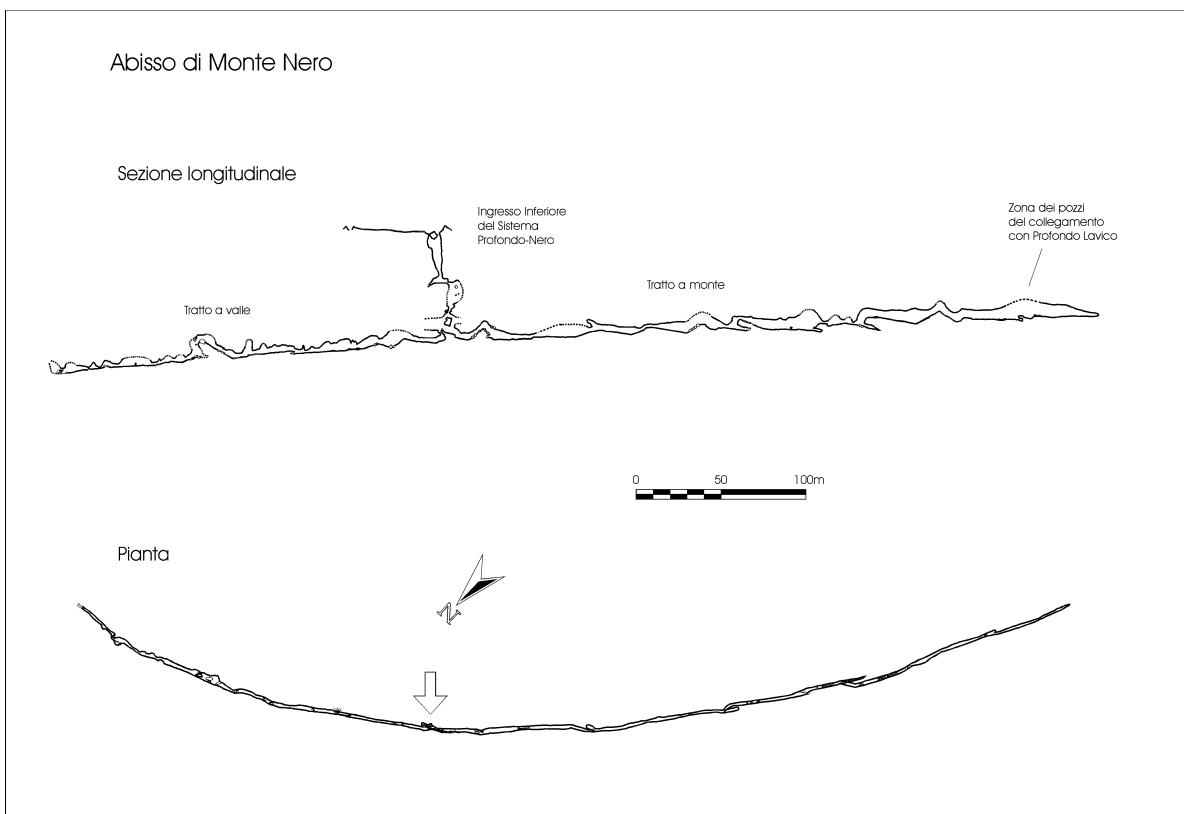
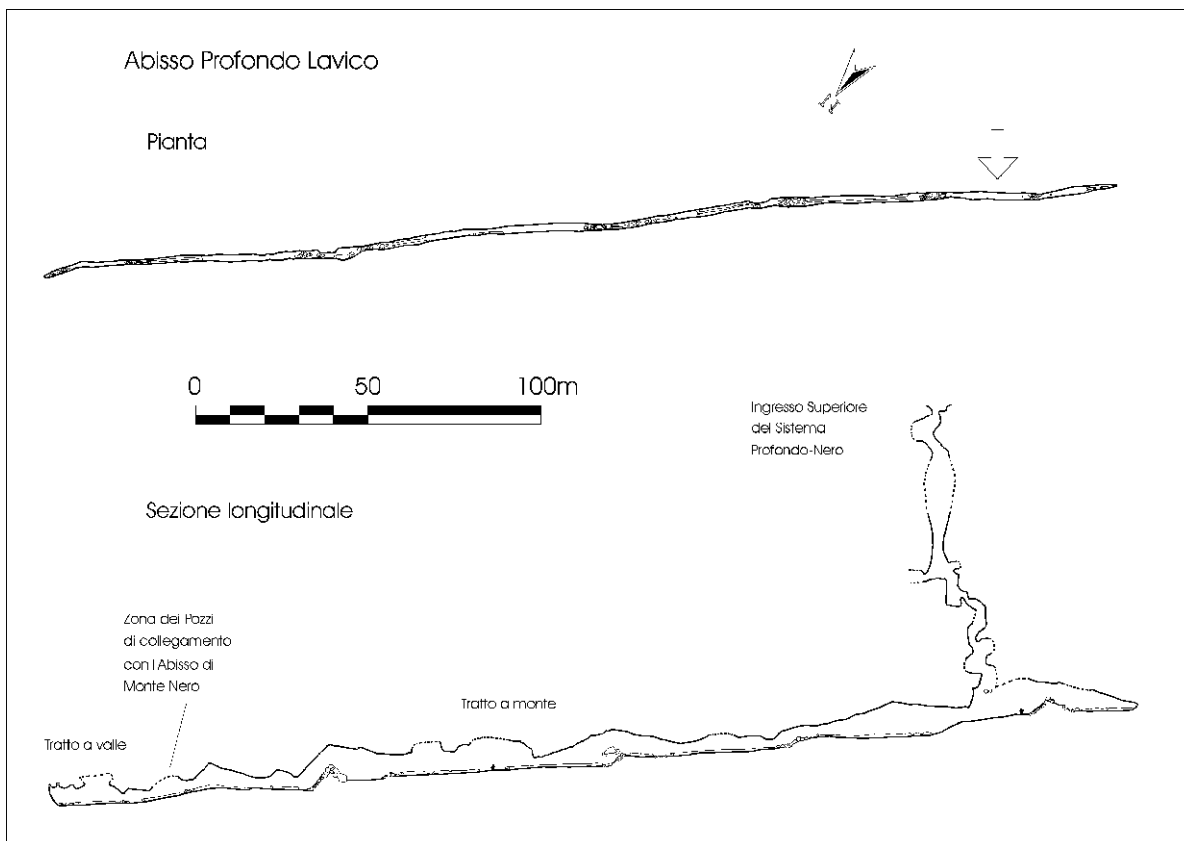


Fig 1. – The map shows the locations of the cavities which are the object of this work.

ABISSO PROFONDO NERO

- *Cadastral number*: SICT 1084
- *Other names*: Pozzi dell'Eruzione del 1923
- *Location*: Bocche del 1923
- *I.G.M.map*: Serie 25, Foglio 613, Sezione III, Linguaglossa, Ediz. 1993
- *Longitude*: High entrance 15° 01' 40" E
Low entrance 15° 02' 07" E
- *References*: Giudice e Scalia, 1994, 161-171; Centro Speleologico Etneo, 1999, 267-270; Forti e Marino, 1995, vol I, 92-100.
- *Survey*: Profondo Lavico (1992-94) V. Biancone, A. Caflisch, G. Giudice, F. Leone, A. Privitera, C. Monaco - Monte Nero (1992-94) A. Caflisch, A. Cariola, G. Giudice, F. La Rosa, F. Leone, A. Leotta, M. Liuzzo, A. Marino, A. Privitera, F. D'Agata, R. Maugeri, R. Petralia.
- *Drawing*: G. Giudice, R. Maugeri
- *Municipality*: Castiglione di Sicilia
- *Year of eruption*: 1923
- *Total length*: >1170 m
- *Total depth*: 174 m
- *Height*: 1995 m, 1900 m
- *Latitude*: 37° 48' 13" N
37° 48' 29" N





Location

This cave is situated along the eruptive fracture created in 1923 long the NE flank of Mt. Etna near Mt. Nero.

Description

This is not a lava tube but an eruptive fracture that a breakdown divided in two main sections each of which has its own entrance: Abisso di M. Nero and Profondo Lavico.

It is the biggest eruptive system surveyed on Mt. Etna and one of the most preserved.

It was explored and surveyed for more than 1 km and is the longest lava cave on Mt. Etna. The average depth is about 50 m and average width is only 2 meters. Some secondary minerals were found inside. One of them was the Portlandite, a very rare mineral never found in a cave (Forti & Marino, 1990).

The main entrance is situated in a little *hornitos* (little ash cone) long the fracture system of 1923. After a 30 m pit there is a big lava block covered by ash. Going NE there is another pit of 35m and then the fissure bottom. From this point going down toward NE the fissure is about 250 m long, instead going up toward SW is about 800 m long.

Long the fissure, the floor is formed by two big lava rolls joined together. The walls are rather parallel and the distance from each other is about 2 m and are covered by a lava layer that is thick in some part and in others only few centimetres thin. In some areas the collapse of lava layers obstructed the way so that climbing becomes necessary making the exploration dangerous.



2



3

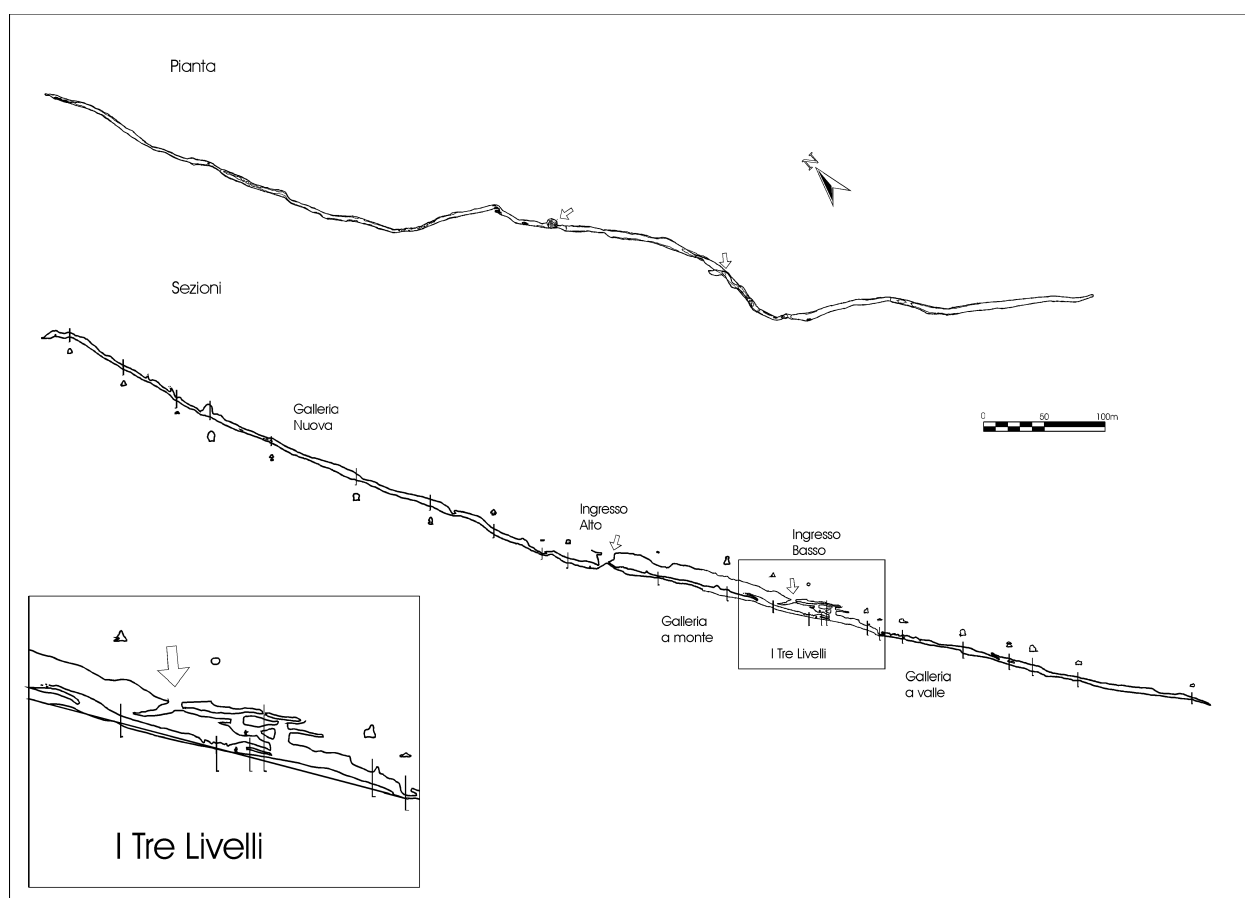
Fig. 2 - The eruptive fracture (G. Giudice).

Fig. 3 - Topographic survey of the fracture (G. Giudice).



GROTTA DEI TRE LIVELLI

- *Cadastral number:* SICT 1004
- *Other names:* Galleria dei Pipistrelli
- *Location:* Contrada Casa del Vescovo
- *I.G.M.map:* Serie 25, Foglio 625, Sezione IV, Sant' Alfio, Ediz. 1993
- *Longitude:* High entrance 15° 01' 57" E
Low entrance 15° 02' 01" E
- *References:* F. Brunelli, B. Scammacca, 1975, 30-31; R. Corsaro, G. Giudice, 1991, 56-59; R. Corsaro, G. Giudice, G. Puglisi, 1995, I, 66-76; Centro Speleologico Etneo, 1999, 286-289.
- *Survey:* (1990) A. Caflisch, F. D'Agata, A. Di Paola, G. Giudice, A. Leotta, A. Liotta, A. Marino, A. Privitera, C. Privitera, G. Puglisi, N. Scalia
- *Drawing:* R. Bonaccorso, G. Giudice.
- *Municipality:* Zafferana Etnea
- *Year of eruption:* 1792-93
- *Total lenght:* 1150 m
- *Total depth:* 304 m
- *Height.:* 1675 m, 1625 m
- *Latitude:* 37° 42' 07" N
37° 42' 02" N



Location

The Tre Livelli cave is located on the southern flank of Mt. Etna, at Contrada Casa del Vescovo, and is reached driving along the provincial road 92, which connects Zafferana Etnea to Rifugio Sapienza. The entrance is next to the road, at about 13.5 km from Zafferana Etnea or 5 km from Rifugio Sapienza.

Description

This is the most important lava tube on Mt. Etna and it was also the main channel of the 1792-93 eruption. Its total length is 1150 m and it's the longest being the others less than 1000 m. Also the

difference in level between the top and the bottom is the highest, 304 m. Probably this is due to the duration of the eruption, 370 days, and its development on the upper part of the flow which is steeper than the lower part where other smaller caves are known. The slope of this cave with its 40° is unusual for lava tubes on Mt. Etna and also in the world.

The name Grotta dei Tre Livelli (Three Levels Cave) was chosen since, near the main entrance, there are three different overlapping levels (although in a short stretch the lower level is further divided).

The entrance is located on the roof of the upper tube which can be followed for a few meters before reaching the middle-level. The merging of these tubes creates a step (6 m) indicating a flow capture. In this point a speleological metallic ladder or a rope is needed. The middle tube is larger than the upper one and characterised by many rocks on the floor. A few meters ahead another 2 m step leads into the lower tube. This can be visited for about 350 m downward and 750 m upward. After a narrow passage, the lower part shows a wide section and a constant slope. The floor is made of clinkers with huge blocks. While going upward, the first 150 m are characterised by a narrow path, where lateral banks of lava often produce key-hole shaped sections. After another narrow passage, situated at the base of a depression, in correspondence of the second entrance, the tube continues for about 40 m and then it seems to end. On the right side a narrow dug passage, 4 meters long, allows to overcome this obstruction. From here the slope increases significantly, reaching 40° in the upper part. In this steep portion there is the passage between a lava tube and the eruptive fissure. The section becomes narrower, the lateral walls are more vertical and the height of the roof gradually increases as far as the point of lava emission.



4



5

Fig. 4 - The upper portion of the cave from the entrance (G. Giudice).

Fig. 5 - The connection between two levels near the entrance (F. Barbagallo).



GROTTA DEL SANTO

- *Cadastral number*: SICT 1032
- *Other names*:
- *Location*: Contrada Diamante
- *I.G.M.map*: Serie 25, Foglio 624, Sezione I, Monte Etna, Ediz. 1993
- *Longitude*: 14° 52' 35" E
- *References*: Bella, Brunelli, Cariola e Scammacca, 1982, 239-240; Greco, 1995, 247; Lo Giudice e Privitera, 1982, 2-10; Petronio Russo, 1880, 85; Santangelo, 1952, 55; Centro Speleologico Etneo, 1999, 230-233.
- *Survey*: (1984) F. Andronico, R. Corsaro, F. Fanciulli, V. Fazio, A. Liotta, A. Mazzullo, S. Milazzo, R. Squadrito - (1998) R. Bonaccorso, O. Cavallaro, G. Garozzo, G. Giudice, F. Leone, A. Leotta, G. Licciardello, A. Marino, L. Musumeci, R. Pelleriti, A. Privitera, A. Sauca.
- *Drawing*: R. Bonaccorso
- *Municipality*: Adrano
- *Year of eruption*: Preistorica
- *Total lenght*: 924 m
- *Total depth*: 44 m
- *Height*: 1043 m
- *Latitude*: 37° 42' 37" N

Location

This cave is situated on the western flank of Mt. Etna near Adrano.

Description

Grotta del Santo is one of the longest caves on Mt. Etna (its total length is more than 900 m). It is composed by many narrow tubes superimposed and joined each other giving to this cave a labyrinthic shape. The entrance is formed by some rock steps. There is a main chamber, quite large, with a little altar dedicated to the Saint Nicola Politi who lived here in XIIth century. The legend tells that the Saint went in this cave just one day before his marriage and lived there for three years from 1134 to 1137. From the entrance five galleries start. The two main tubes have the same orientation NNE-SSW while the others have many different directions.

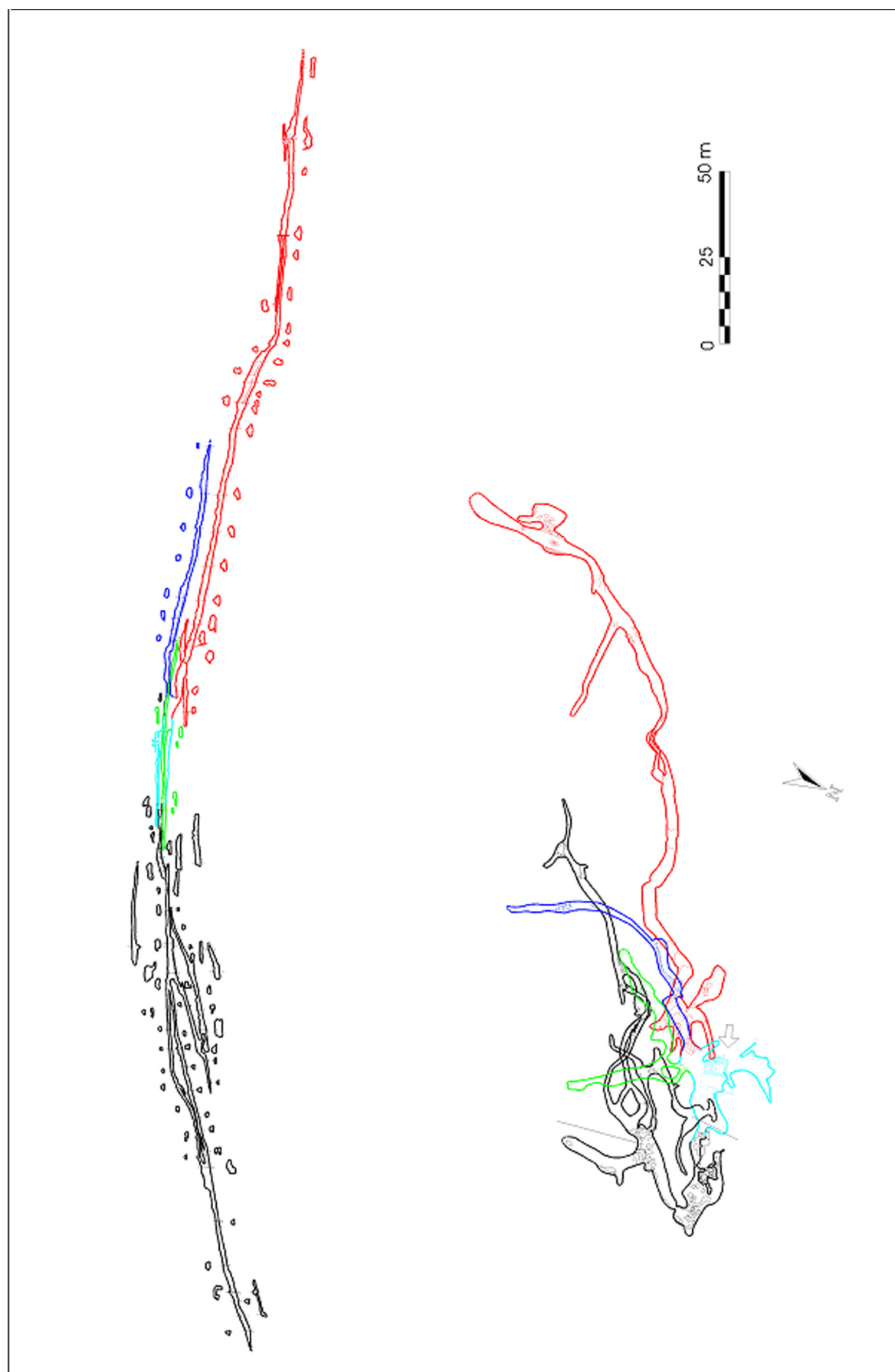
The developing of this cave was probably in a flat area where these little tubes were formed like in a delta of a river.

The age of this cave is prehistoric and some pottery was discovered inside probably dating back to the Malpasso culture, last phase of the Copper Age (PRIVITERA, 1999). The entrance is on a little outcrop of prehistoric lava and surrounded by more recent lava flows, maybe 1595.



Fig. 6 - Entrance room: on the left the votive altar (R. Maugeri).

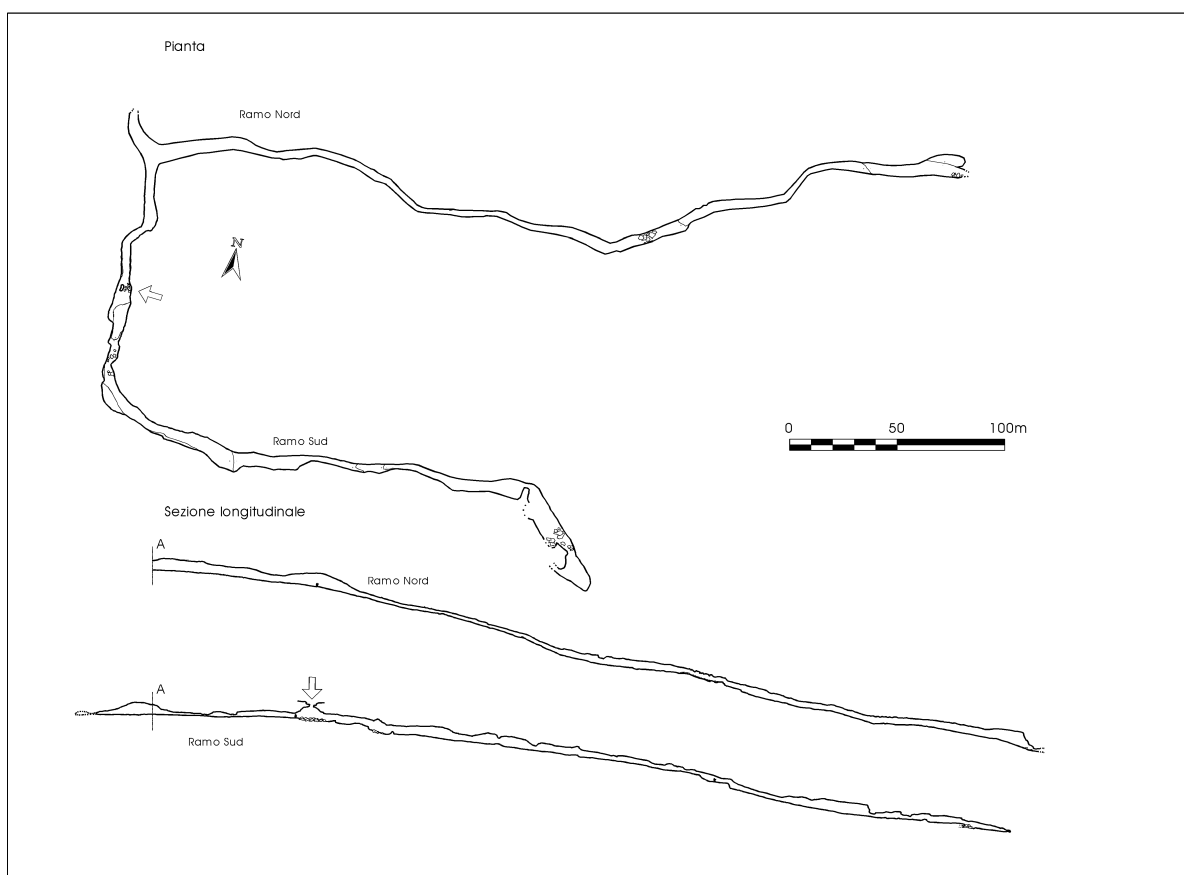
Fig. 7 - The B2 branch spot in which the two lava tubes are reunite (R. Bonaccorso).





GROTTA CUTRONA

- Cadastral number: SICT 1216
- Other names: Grotta MC1 Grotta
- Location: via Liardo
- I.G.M.map: Serie 25, Foglio 625, Sezione IV, Sant'Alfio, Ediz. 1993
- Longitude: 15° 01' 23" E
- References: Forti, Giudice, Marino e Rossi, 1994, 125-151; Giudice e Leotta, 1994, 213-230; Centro Speleologico Etneo, 1999, 304-308.
- Survey: (1990) (1994) A. Caflisch, G. Giudice, F. Leone, A. Privitera
- Drawing: G. Giudice, R. Maugeri.
- Municipality: Zafferana Etnea
- Year of eruption: 1991-93
- Total Length: 870 m
- Total depth: 97 m
- Height: 1860 m
- Latitude: 37° 43' 09" N



Location

This cave is situated on the East flank of Mt. Etna, inside “Valle del Bove” near Serra Valalaci.

Description

This cave was formed during the 1991-1993 eruption in Valle del Bove. It was explored just one year after the eruption when inside there was a temperature of about 30-40°C. In some parts the temperature was over 70°C and, naturally, were not explored. The most interesting things founded in this cave were the beautiful speleothems composed by different types of salts, melted by rainwater while dripping from the upper layer, and by aerosol from gases released during the cooling of lava. Their formation is possible only under particular conditions of temperature and humidity, and, when these conditions change with the cooling of the rocks, the rainwater destroys the speleothems melting their salts. These type of speleothems were first observed by our cave group in the lava tubes of 1983 eruption and then destroyed by the 1985 lava flow.

The cave is a long U shaped tube with its branches oriented toward East.



The entrance is on a roof collapse in the middle of the tube in its southern branch (300 m long) hence a metallic ladder (10 m) or a rope is needed. The shape is variable being wider in the flat parts and narrower in the steepest parts. The ending part is wide and it closes by the lowering of the ceiling.

The northern gallery is about 500 m long. From the entrance going northward there is a crawling passage. After this passage there is a wide gallery going toward NW and 25 m long while the rest of the cave develops eastward. This gallery was found plenty of mineralization but today only a white heap remains long a short part of this gallery. The tube ends with a breakdown.



Fig. 8 - Highly concreted gallery (R. Bonaccorso).

Fig. 9 - A “fantasy shaped” salt concretion (R. Bonaccorso).

GROTTA PETRALIA

- *Cadastral number*: SICT 1205
- *Other names*: Grotta Leucatia
- *Location*: via Liardo 17
- *I.G.M.map*: Catania, Foglio 270, Quadrante IV, Orient. SE, Ediz. 1971
- *Longitude*: 15° 05' 07" E
- *References*: Privitera, 1994, 17-35; Privitera, 1999, 85-104; Centro Speleologico Etneo, 1999, 176-179.
- *Survey*: (1990) R. Bonaccorso, A. Caflisch, G. Calabretta, F. D'Agata, G. Giudice, G. Gulli, R. Maravigna, A. Marino, A. Privitera, C. Privitera.
- *Drawing*: R. Bonaccorso, G. Giudice
- *Municipality*: Catania
- *Year of eruption*: Prehistorical
- *Total Length*: 518 m
- *Total depth*: 21 m
- *Height*: 138 m
- *Latitude*: 37° 31' 59" N

Location

The entrance of this cave is situated in a private garden in Catania, Via Liardo 17.

Description

This cave is long more than 500 m and it develops under the urban area of Catania. It is the longest cave at such a low altitude but its main feature is the discovery of the most important archaeological site with a lot of pottery and some burials. This site was found intact without any tampering. The entrance is near one extreme of the cave. The access is by a concrete staircase. Here the tube is wide and it was used as an air-raid shelter during the II World War so that only

few prehistoric pottery were found. Going East the tube is only 30 m long and it is wide and high. Going West the tube becomes low and, after a narrow passage, there is the first breakdown 20 m long. Walking upon the blocks, at the end of the gallery, a narrow and short passage allows the access to the rest of the cave. Until its discovery the remaining part of the cave was preserved for centuries. Few meters ahead the gallery becomes wide and high and the floor is flat. Here tombs, human bones and broken pottery were found. The pottery was broken maybe because of the poor manufacture or ancient rituals. Now they are collected and catalogued by the archaeologists. After 300 m and three breakdowns there is a depression due to a capture phenomenon of the lava flow. Going down there is a crawling gallery containing prehistoric pottery and human bones. This low gallery ends in the west part of the cave next to a recent breakdown probably due to building works. The main gallery becomes lower and ends in the eastern part of the same breakdown after an area characterised by stone fences probably used for rituals. A very narrow passage, that is not possible to cross, connects the eastern side to the western.

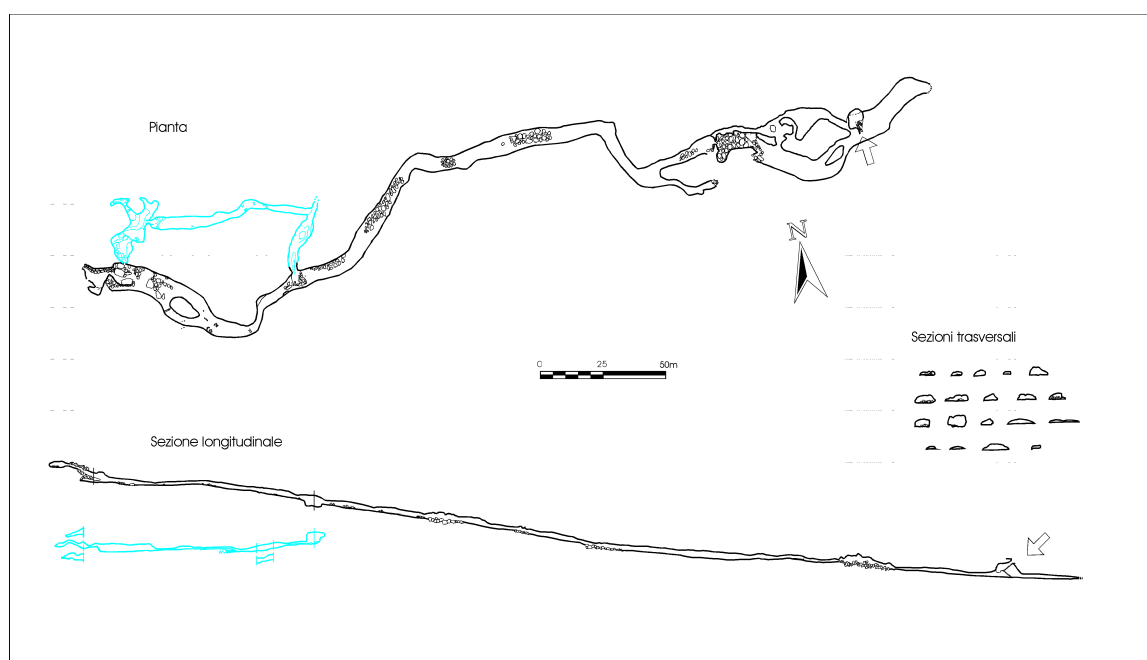


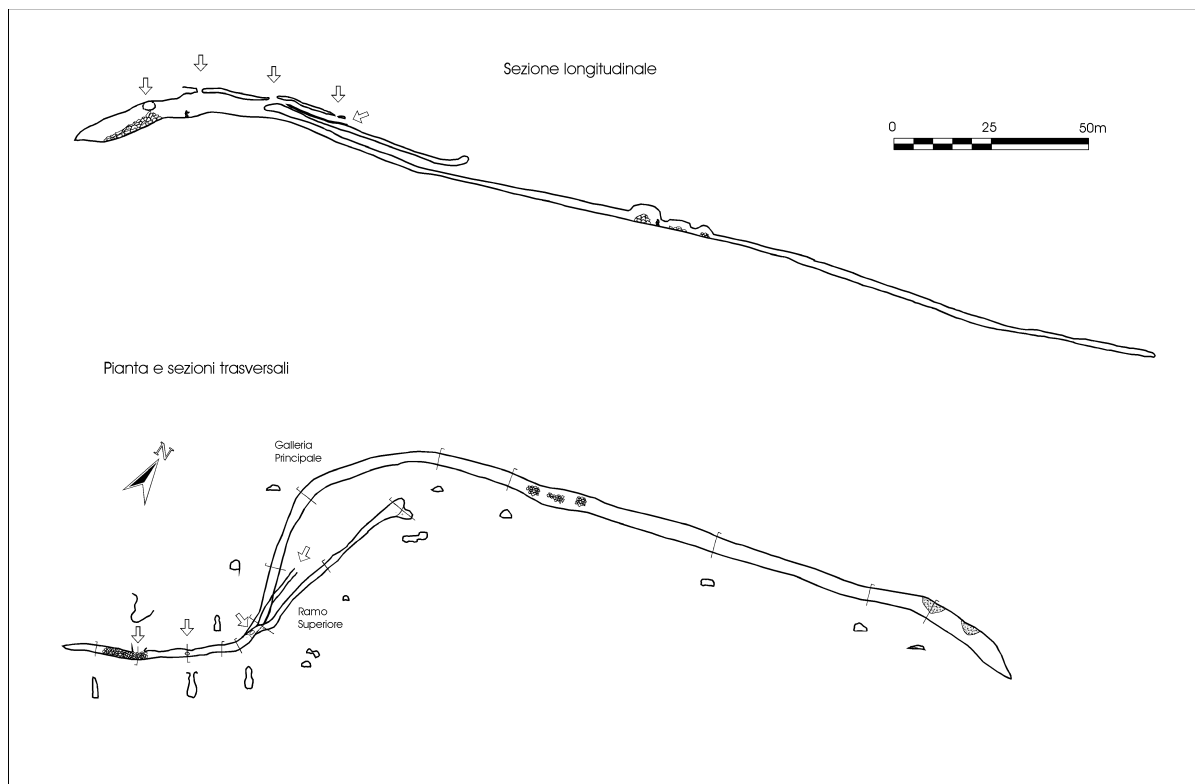
Fig. 10 - Big fluvial pebble into the cave (R. Maugeri).



Fig. 11 - Evidences into the western hall (R. Maugeri).

GROTTA DI SERRACOZZO I

- *Cadastral number:* SICT 1065
- *Other names:*
- *Location:* Contrada Serracozzo
- *I.G.M.map:* Serie 25, Foglio 625, Sezione IV, Sant'Alfio, Ediz. 1993
- *Longitude:* 15° 03' 26" E
- *References:* Barone, Priolo A., Priolo G., Sanfilippo, Scammacca; 1994, 376; Cavallaro e Licitra, 1975, 245-248; Rittmann, Romano, Sturiale, 1971 e 1973, 418-430; Centro Speleologico Etneo, 1999, 282-283.
- *Survey:* (1975) F.Cavallaro, A. Di Paola, G. Montana
- *Drawing:* R. Bonaccorso, F. Cavallaro
- *Municipality:* Milo
- *Year of eruption:* 1971
- *Total lenght:* 350 m
- *Total depth:* 60 m
- *Height:* 1840 m
- *Latitude:* 37° 45' 28" N



Location

The cave is situated on the East flank of Mt. Etna, in “Contrada Serracozzo” area.

Description

This cave, formed during the 1971 eruption, is a beautiful example of lava tube starting from an eruptive fracture (50 m long) that can be partially visited. There is a clear boundary between the fracture and the lava tube. The cavity is “S” shaped and the entrance is possible through a collapsed wall of the fissure situated where the lava started. The section of this part has a keyhole shape. The main tube is long about 300 m with a difference in level of about 60 m.

From the entrance the fissure goes toward SW inside the mountain for about 20 m. Most part of it is covered by the debris of the collapse.

From the entrance, going toward NE the floor is about 3 m lower than the debris cone. After about 30 m the cave turns left. In this point the fracture ends and three tubes, having different directions, begin from the fracture.

The main gallery turns northward and, after 40 m, toward ENE for about 200 m until it closes. The width is from 2 to 4 m and the height from 1 to 4 m so that the shape is generally squeezed. There are some collapses. The ending part is obstructed by volcanic sand conveyed by the waters.

The other two galleries are narrow and short and can be easily reached from outside through a little collapse of the roof. One is about 50 m long, the other is about 20 m long.



12



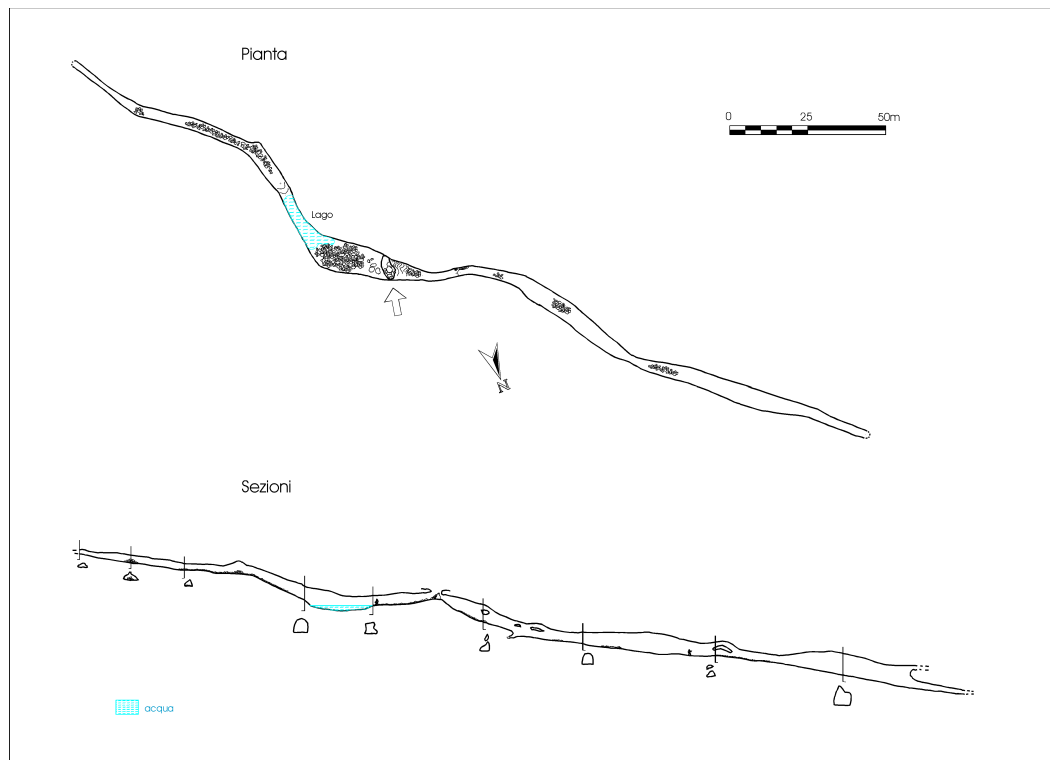
13

Fig. 12 - The characteristic morphology of the tube in the higher portion of the cave (R. Bonaccorso).

Fig. 13 - A section of the main conduit (R. Bonaccorso).

GROTTA DEL LAGO

- *Cadastral number:* SICT 1196
- *Other names:* Grotta dei pecorai
- *Location:* Sciara del Follone
- *I.G.M.map:* Serie 25, Foglio 612, Sezione II, Randazzo, Ediz. 1993
- *Longitude:* 14° 59' 53" E
- *References:* Barone, Priolo A., Priolo G. Sanfilippo e Scammacca, 1994; Centro Speleologico Etneo, 1999, 250-251.
- *Survey:* (1994) A. Balsamo, A. Leotta, S. Raciti, N. Scalia
- *Drawing:* A. Balsamo, R. Bonaccorso
- *Municipality:* Randazzo
- *Year of eruption:* 1614-24
- *Total lenght:* 288 m
- *Total depth:* 41 m
- *Height:* 2130 m
- *Latitude:* 37° 48' 13" N



Location

This cave is situated on the northern flank of Mt. Etna in the “Sciara del Follone” area.

Description

This cave is less than 300 m long but it is interesting for its permanent water deposit used by shepherds to water the flocks. In winter this deposit is frozen for the low temperature reached at the opening level of the cave. Only another cave, Grotta del Gelo, described in other papers in this volume, has a similar deposit frozen all over the year. Grotta del Lago is higher than Grotta del Gelo and it is in the same area but, different conditions, as a constant air flow, melt the ice during the summer.

The entrance is by a roof collapse at about one third of the cave. Going upward, after a breakdown, there is the little “lake”, about 15 meters long with a depth of 50 centimetres. After the lake there is another breakdown. This part is long about 130 m and at the end it is so narrow that the passage is not possible but a connection with the surface produces a constant air flow.

Going downward from the entrance, there are short and overlapping levels. This part, about 170 m long, is larger than the other with the exception of the ending section where it closes becoming narrower.



14



15

Fig. 14 - The iced lake (G. Tomasello).

Fig. 15 - The two levels of the lower section (G. Tomasello).

GROTTA DEGLI ARCHI

- *Cadastral number*: SICT 1005
- *Other names*: Grotta di Monte Pecoraro
- *Location*: Bocche eruttive del 1607
- *I.G.M.map*: Serie 25, Foglio 624, Sezione I, Monte Etna, Ediz. 1993
- *Longitude*: High entrance 14° 58' 03" E
Low entrance 14° 57' 52" E
- *References*: Andronico, 1930, 211; Brunelli e Scammacca, 1975 31-32; De Roberto, 1881; Miceli, 1933; Poli, 1959a, 6; 1959b, 7; Sartorius, 1880, II, 109; Centro Speleologico Etneo, 1999, 225-227.
- *Survey*: (1999) R. Bonaccorso, G. Calcagno, F. Leone, P. Nastasi
- *Drawing*: R. Bonaccorso.
- *Municipality*: Biancavilla
- *Year of eruption*: 1607
- *Total lenght*: 284 m
- *Total depth*: 73 m
- *Height*: 2075 m, 2010 m
- *Latitude*: 37° 43' 43" N
37° 43' 43" N

Location

This cave is situated on the SW flank of Mt. Etna near the Galvarina Refuge.

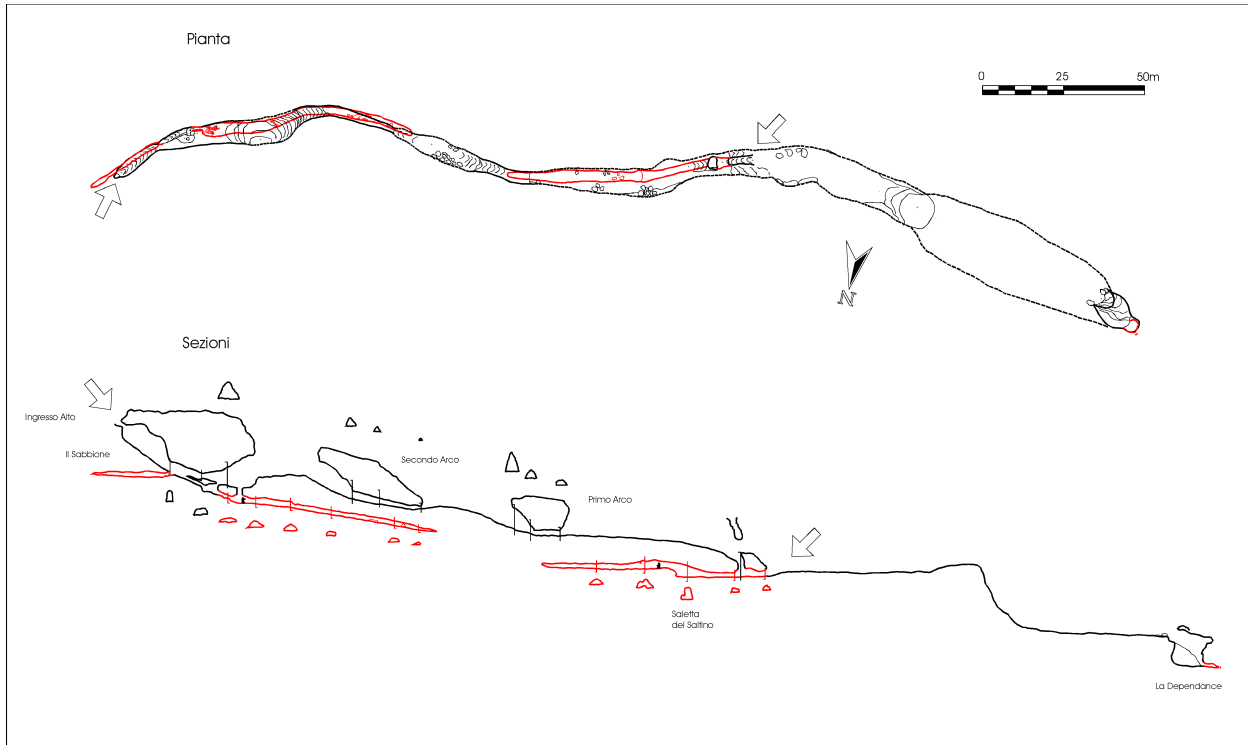
Description

Grotta degli Archi is an important lava tube associated with eruptive fracture and cones.

There are two overlapping levels formed by a lava channel and a lava tube. The upper level starts from the base of a little cone and then continues downward alternating beautiful lava channels with short lava tubes whose sections look like arches and give the name to the cave (Arches Cave). This level is long about 350 m but most of it is open.

Underneath there is another lava tube accessible from both ends but obstructed in the central part for the joining of the floor and the ceiling. The higher entrance, situated under the arch next to the cone, consists of a slope leading to a lava cave 100 m long. Another slope, situated on the lower part of the channel, leads to the lava tube that can be explored for about 70 m to the obstruction after a climbing of 3 m.

About one hundred years ago, this cave was probably used as a snow deposit.



16



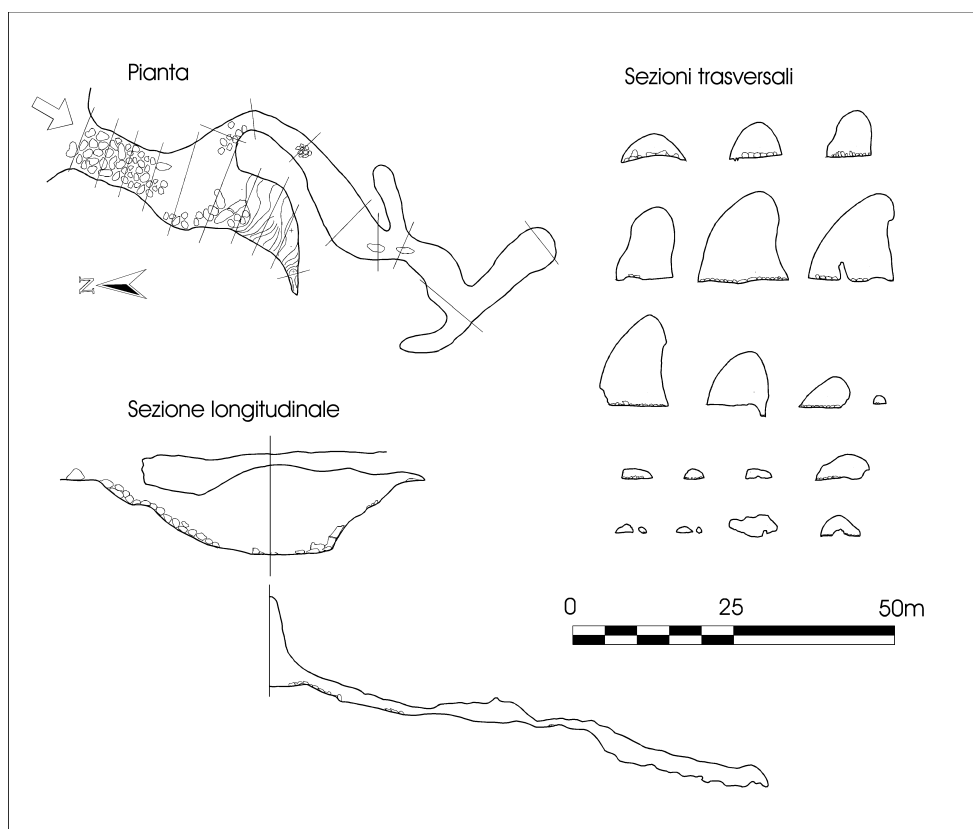
17

Fig. 16 - Grotta degli Archi. The first arch (M. Liuzzo).
Fig. 17 - Grotta Catanese I. The entrance (R. Bonaccorso).



GROTTA CATANESE I

- Cadastral number: SICT 1037
- Other names:
- Location: Passo della Catanese
- I.G.M.map: Serie 25, Foglio 624, Sezione II, Adrano, Ediz. 1993
- Longitude: 14° 56' 21" E
- References: Brunelli e Scammacca, 1975; Bella, Brunelli, Cariola, Scammacca, 1982, 245-246; Centro Speleologico Etneo, 1999, 220-221.
- Survey: (1976) Centro Speleologico Etneo
- Drawing: R. Bonaccorso, A. Laudani
- Municipality: Ragalna
- Year of eruption: Storica non datata
- Total lenght: 145 m
- Total depth: 27 m
- Height: 905 m
- Latitude: 37° 35' 58" N

*Location*

This cave is situated on the south flank of Mt. Etna near Ragalna town.

Description

This cave is only 145 m long but a part of it is the largest lava tube on Mt. Etna. The entrance is on a great collapse and maybe in the past the tube was longer. Going downward over the blocks there is the main tube 13 m high, large more than 10 m and 25 m long. It is closed by a fall of lava coming from the ceiling. The remaining part of the cave, developing as a branch of this channel and starting from its lower area, presents smaller dimensions.

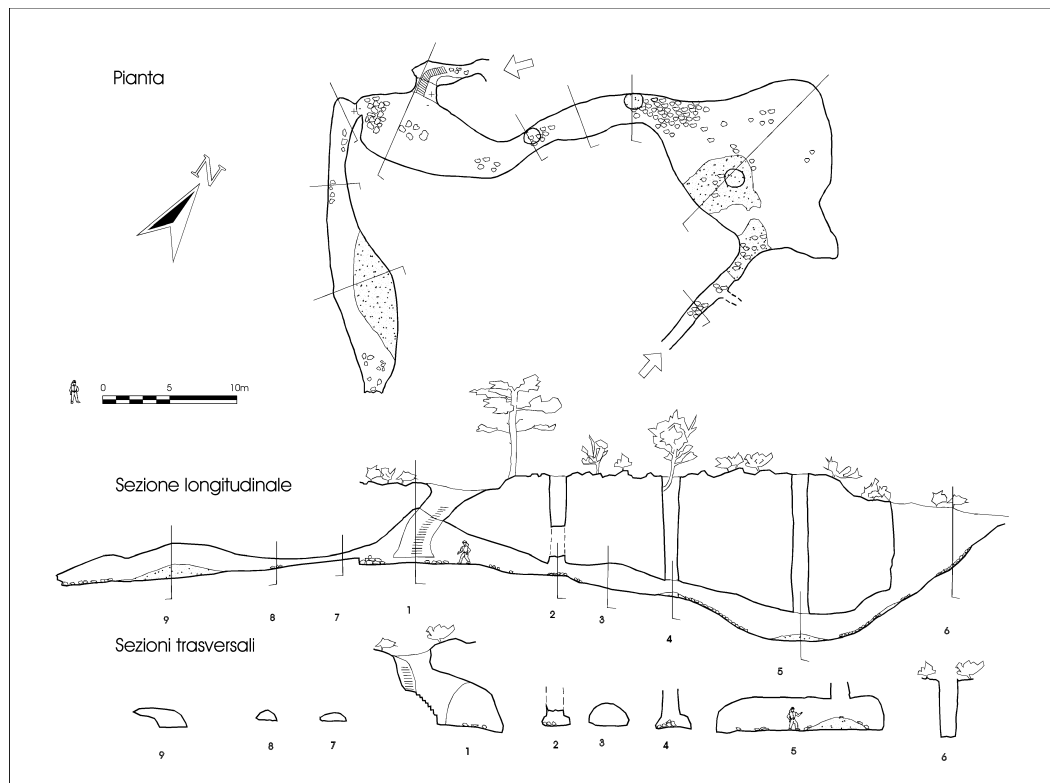
Nearby the collapse zone, another cave, Grotta Catanese II, opens as a further branch of the main tube.

The age of the eruption that formed this cave is unknown but it is believed to be historical.

The name of this cave comes from a legend which tells about a woman from Catania who was killed by brigands in order to put a spell on the booty hidden in this cave. Now the only way to find the booty is to kill someone in the cave!

GROTTA DEI LADRI

- *Cadastral number:* SICT 1117
- *Other names:* Grotta dei Briganti o della Neve
- *Location:* Piano delle Donne
- *I.G.M.map:* Serie 25, Foglio 625, Sezione IV, Sant' Alfio, Ediz. 1993
- *Longitude:* 15° 04' 20" E
- *References:* Barone, Di Paola, Fanciulli, Marino, Maugeri, 1989,16-17; Cantarella, 1985, 7; Houel, 1784, II, 81-82; Centro Speleologico Etneo, 1999, 276-277.
- *Survey:* (1988) N. Barone, A. Di Paola, F. Fanciulli, A. Marino, R. Maugeri
- *Drawing:* R. Bonaccorso, F. Fanciulli
- *Municipality:* Sant' Alfio
- *Year of eruption:* Preistorica
- *Total lenght:* 59 m
- *Total depth:* 4 m
- *Height:* 1547 m
- *Latitude:* 37° 46' 21" N



Location

This cave is situated on the East flank of Mt. Etna on the Mareneve road (Km 19).

Description

The legend of this cave tells that it was used by brigands as a refuge. The wells connecting the cave to the surface were used to hide their booty which was taken back walking through the easiest accesses. But in reality this little lava cave was used as a snow deposit. Other little caves on Mt. Etna were used for such a purpose but this cave was also modified to achieve a better use. The use of this cave was depicted by J. Houel (Houel 1784) in the *Grotte à la neige* painting. Three wells were dug in order to fill the cavity of snow. One of them is closed by debris but the others are still open.

This cave has two easy entrances. One entrance was modified with some steps carved in a wall, the other was carved in the basalt to create a steep slope.

A date (1776) can be read by the entrance of the slope which gives access to a large and low chamber. One of the wells reaches this point where there is a little debris cone. Climbing the debris

westward a narrow gallery leads to the second well with a tree inside. At the other end of the gallery (about 10 m long) another large chamber (showed in the *Grotte à la neige*) gives access, eastward and after a narrow passage, to a little gallery (20 m long), northward to the exit with the steps carved in the basalt.



18



19

Fig. 18 - A corner of the Thieves Hall (G. Tomasello)

Fig. 19 - Houel Room: the stairs carved in stone (R. Bonaccorso).



References

- ANDRONICO D., 1930: *L'Etna e le sue meraviglie*, Catania.
- BARONE N., DI PAOLA A., FANCIULLI F., MARINO A., MAUGERI R., 1989: *La Grotta dei Ladri*, *Economia Siciliana* 40, I Semestre 1989: 16-17.
- BARONE N., PRIOLO A., PRIOLO G., SANFILIPPO G., SCAMMACCA B., 1994: *Grotte vulcaniche di Sicilia, notizie catastali: terzo contributo (da Si CT 51 a Si CT 75)*. Boll. Acc. Gioenia di Sc. Nat., 27, (346): 367-398, Catania.
- BELLA V., BRUNELLI F., CARIOLA A., SCAMMACCA, 1982: *Grotte vulcaniche di Sicilia, notizie catastali: secondo contributo (da Si CT 26 a Si CT 50)*, Boll. Acc. Gioenia di Sc. Nat., 15, (320): 229-292, Catania.
- BRUNELLI F., SCAMMACCA B., 1975: *Grotte Vulcaniche di Sicilia (notizie catastali)*, G.G.C. – C.A.I. Sez. dell'Etna, Catania.
- CANTARELLA F. 1985:, *La Grotta dei Ladri*, *Il Prometeo* 4, Settembre 1985: 7.
- CAVALLARO F., LICITRA G. M., 1975: *Scheda per l'escursione del 26.8.1975 alla Grotta di Serracozzo I*, in *Atti Settimana Speleologica Catanese e Seminario sulle grotte Laviche*, Gruppo Grotte Catania e Club Alpino Italiano, Catania.
- CENTRO SPELEOLOGICO ETNEO, 1999: *Dentro il vulcano. Le grotte dell'Etna*, Parco dell'Etna, Catania.
- CORSARO R., GIUDICE G., 1991: *Quasi record ai Tre Livelli*, in *Speleologia Anno XII*, n.24
- CORSARO R., GIUDICE G., PUGLISI G., 1995: *Sistema 3 Livelli – KTM: Studio comparato di una colata con gallerie di scorrimento lavico*, *Atti I Conv. Reg. di Speleol. della Sicilia*, vol. I, Ragusa.
- DE ROBERTO F., 1881: *Cronache per il "Fanfulla"*, a cura di G.Finocchiaro Chimirri, Milano, 1973.
- FORTI P., GIUDICE G., MARINO A., ROSSI A., 1994: *La Grotta Cutrona (MC1) sul Monte Etna e le sue concrezioni metastabili*. Boll. Acc. Gioenia Sci. Nat. V.28, n.348, p.125-151.
- FORTI P., MARINO A., 1995: *Nota preliminare su un ritrovamento di un nuovo minerale di grotta nei "Pozzi dell'Eruzione del 1923 (Si Ct 1084)*. *Atti I° Convegno Regionale*, Ragusa 1990, vol. I, 92-100.
- GIUDICE G., SCALIA N., 1994: *La frattura eruttiva di Profondo-Nero*, Boll. Acc. Gioenia di Sc. Nat., 27. 348.
- GIUDICE G., LEOTTA A., 1994: *La Grotta Cutrona (MC1)*, Boll. Acc. Gioenia di Sc. Nat., 27. 348.
- GRECO, 1995: *I Santi Patroni di Sicilia*, Dario Flaccovio Editore, Palermo.
- HOUEL J., 1784, *Voyage pittoresque des Isles de Sicile, de Malte et de Lipari*, Paris.
- LO GIUDICE R., PRIVITERA M., 1982: *Contributo alla conoscenza della bioflora cavernicola dell'Etna*. *Archivio botanico*.
- MICELI F., 1933: *Le grotte dell'Etna*. *Rivista del C.A.I., sezione dell'Etna*, Catania, numero unico.
- PETRONIO RUSSO S., 1880: *Della vita e del culto di San Nicolò Politi*, Messina.



- POLI E., 1959 (a): *Sulla genesi di alcune grotte dell'Etna*. Boll. Acc. Gioienia Sc. Nat. IV. 5 (1): 1-17.
- POLI E., 1959 (b): *Genesi e morfologia di alcune grotte dell'Etna*. Boll. Soc. Geogr. Ital., 9/10: 3-14.
- PRIVITERA F., 1994: *Esplorazione archeologica della Grotta Petralia*. Boll. Acc. Gioenia di Sc. Nat. 27, (348): 17-35, Catania.
- PRIVITERA F., 1999, *Le Grotte etnee nella preistoria*, in “*Dentro il vulcano - Le grotte dell'Etna*”, 85-104.
- RITTMANN A., ROMANO R., STURIALE, 1971: *L'eruzione etnea dell'aprile-giugno 1971*, Atti Acc. Gioenia di Sc. Nat. in Catania, S. VII, VIII.
- RITTMANN A., ROMANO R., STURIALE, 1973: *Some considerations on the 1971 Etna eruption and on the tectonophysics of the Mediterranean area*, Geol. Rund., B. 62, H. 2.
- SANTANGELO A., 1952: *San Nicolò Politi*, Catania.
- SARTORIUS VON WALTERHAUSEN W., 1880: *Der Aetna*, Lipsia.