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Union Internationale de Spéléologie (UIS)
Commission on Volcanic Caves

e-NEWSLETTER

No.78 – October 2021

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<http://www.uis-speleo.org/>



<http://www.vulcanospeleology.org/>

The Commission on Volcanic Caves Newsletter has been published regularly since December 22, 1993. The Newsletter is available free of charge to all members of the commission, and to others who are interested in Volcanic



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MISSION STATEMENT

The UIS Commission on Volcanic Caves encourages exploration and scientific investigation of volcanic caves, and hosts the International Symposium on Vulcanospeleology about every two years



COVER PHOTO

**Turi Coppola in Seracozzo
Cave during the 19th
International Symposium on
Vulcanospeleology**

By Roberto Conti

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Editorial

Well vulcanospeleologists, welcome to another edition of the Newsletter. Despite the continued disruption of our hobby imposed by the global Corona virus pandemic our members are still finding ways to not only go out and explore beneath volcanoes but to write about their exploits as well.

In this issue we have a comprehensive report on the successful 19th symposium on Volcanic Caves where our Sicilian friends managed to host a terrific event under the most difficult circumstances. We have more news on exploration in Lanzarote and the first details of next year's symposium in Vietnam that looks to be an absolutely amazing event. With luck I hope that more of us will be able to attend as the threat from COVID 19 starts to wane.

As well as the long articles we have some interesting short pieces from Martin Mills. These are a review of the book "Melting of the Earth" and further memories of our recently departed friend Jim Simons. Finally there is a request for readers to provide their opinions on an interesting cave in Thailand that just may be of volcanic origin. Very many thanks are extended to all of the contributors to this issue, and apologies for the lateness in publication, unfortunately work often gets in the way of the important things in life.

I am thrilled to be continuing as your Newsletter after the meeting of the Commission in Sicily, and I am always excited to receive any material related to volcanic caves. The newsletter is published approximately every six months, if you think you might have something to contribute but are unsure whether it is suitable or how to provide material please feel free to contact me via the address on Page 3.

Ed Waters, 23rd October 2021

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Message from the Chairman

Fellow vulcanospeleologists

19th International Symposium on Vulcanospeleology

I am so pleased that some of you were able to successfully endure the challenges of international travel during the global Covid pandemic to attend ISV19 at Catania in Italy. Members from the United States, the Netherlands, Germany and the Italian 'mainland' were able to attend. Together with several local members, and also our friends in Sicily, there were about 25 participants. This made it one of the smallest ISVs convened by the Commission on Volcanic Caves (CVC) in recent years. A boutique ISV! However, the numbers were bolstered by a further 20 members who registered for online participation.

The online sessions were a first for the CVC and about 40% of all presentations were delivered from places far removed from the lecture theatre in Catania. Of course, there were a few delays and interruptions caused by dropouts, equipment compatibility issues and technical limitations, but all presentations were successfully completed.

As anyone who has attended an ISV knows, the presentation sessions are a mandatory feature of all ISVs, but cave inspection trips, above-ground excursions and social get-togethers are also essential activities and there was a good mix of them all at Catania. It is most disappointing that because of Covid, it became necessary to abandon the proposed boat trip to the Aeolian Islands and the 3 day caving trip.

Unfortunately, I was not able to travel to Catania for ISV19. However, I understand from feedback and from the many photos I have seen, the ISV was successful, interesting and most enjoyable. In this issue you can read all about the ISV from Franz Lindenmayr's perspective.

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That ISV19 happened at all was due largely to the untiring efforts of Roberto Conti and especially Giuseppe Priolo and his associates in Gruppo Grotte Catania (GGC), in the local branch of the Club Alpino Italiano (CAI) and in the University of Catania. On behalf of all CVC members, I thank everyone involved in making the ISV such a successful event.

CVC Meeting

I am very grateful to Jan Paul Van Der Pas, the previous CVC Chairman for agreeing to run the CVC meeting in Catania. I had asked Jan Paul to do this in case there were any online difficulties on the day. As it turned out, there were no such problems.

ISV20 to be held in Vietnam

The principal agenda item at the CVC meeting was a presentation by Mrs Trần Nhị Bạch Vân from the Foreign Affairs Department of Dak Nong Province, Vietnam on a proposal to organise and host ISV20 in Dak Nong Province in November 2022. A copy of the proposal is included elsewhere in this newsletter.

After some discussion, the meeting agreed to accept the offer. The ISV will be organised by the Dak Nong Provincial People's Committee in conjunction with the Vietnam Institute of Geoscience and Mineral Resources and the Vietnam National Museum of Nature. The CVC will be working closely with the organisers in coming months to firm up the timing, the program, the excursion activities and other details.

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CVC Officeholders

The meeting confirmed the positions of existing CVC officeholders:

Chairman - John Brush

Vice Chairman – Greg Middleton

Membership Officer – Roberto Conti

Newsletter Editor – Ed Waters

Web Master – Dirk Stoffels

ISV21 in 2024

At the CVC meeting it was noted that preliminary expressions of interest had been received from Iceland (with no supporting information) and Argentina. The brief outline from Argentina proposed holding the symposium in San Rafael city in Mendoza Province followed by a multi-day field trip to visit caves in the Malargüe area of the province and also in two adjoining provinces. As the volcanic areas are remote, a number of logistical issues, including transport and accommodation, will need to be resolved. The Commission will work with proponents to develop a comprehensive proposal for formal consideration at ISV20 late next year.

John Brush

Chairman / President

Commission on Volcanic Caves.

International Union of Speleology

Exploration of volcanic Fumaroles in Lanzarote

By laurens Smets, The Netherlands

What are Fumaroles?

"A fumarole (Latin:fumus, smoke) is an opening in the Earth's crust,often in the vicinity of volcanoes or in volcanically active areas, from which warm to very hot gases and fumes escape.

These gases or vapor's consist mainly of water vapour and carbon dioxide, but there may also be toxic ones such as hydrogen chloride, hydrogen fluoride or hydrogen sulfide. "

"A condition for the existence of fumaroles is the supply of water. This can come from precipitation that quickly disappears through the, generally porous,soil and from underground supply. "

"Fumaroles are closely related to hot springs and geysers. In areas where groundwater levels rise near the surface, fumaroles can become hot springs. A fumarole rich in sulfur gases is called an Solfatara; a fumarole rich in carbon dioxide is called an Mofette. "

So far Wikipedia and Brittanica.com with their explanation about Fumaroles. This phenomenon can be found in Iceland, Yellowstone National Park, Costa Rica, Hawaii and also on the Canaria Islands.



Photo (Left) Chmee2Valtameri (Wikipedia) Example of an active Fumarol: Námafjall, Mývatn Lake,Iceland. Photo(Right) source: Pinterest

According to rumours some fumaroles also could be found on. However, it had never came to an investigation.

In a remote area just on the edge of Timanfaya National Park, some fumaroles were known on the edge of a volcano called El Señalo.

In February 2020 a mini expedition was organized by some members from Speleo Nederland accompanied by Gustavo David Santana Gómez (Vulcan Vertical) and Carmen Smith (Craven Pothole club).

As in limestone caves you can divide fumaroles in active and inactive systems. Of course, only inactive fumaroles were investigated

Not much is known about Fumaroles in the whole world. It is known what function they perform in the creation of volcanoes, but to look inside is not really something where a scientist is waiting for.

Furthermore, you should still be lucky that they are open and are not shut during the cooling process. Furthermore, they are often unstable, there are loose blocks which have been fallen out of the ash cloud, or the brittle side walls have been partially collapsed. The rock is often glass-hard from the outside , but once a few centimeters

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into the wall it is full of air bubbles, soft fused grains and porous sediments.

An additional danger of this crumbly rock is that you could step through a false floor.



2 examples of closed fumaroles in Lanzarote (Photo Laurens Smets)

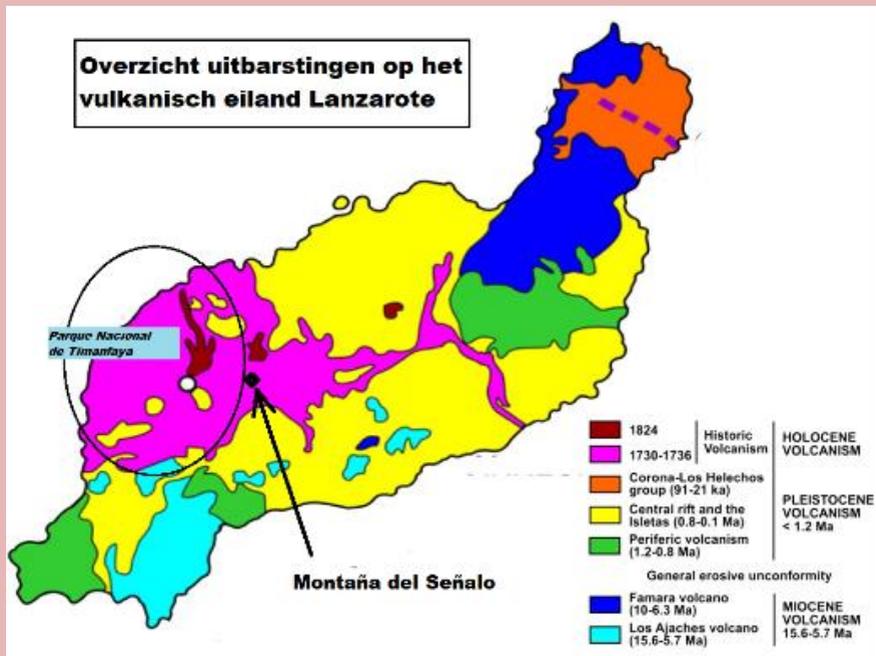
The Montañas del Señalo consist of a succession of eruptions in the year 1730 to 1736. The trip there is already a unique and special experience quite unique in the world. It looks like a lunar landscape, arid and dry with some sparse vegetation here and there.



Montañas del Señalo (Photo Laurens Smets)

Volcanic grit (in Spanish picón) as witnesses to a pyroclastic eruption, here and there a drift of sand blown over from the Sahara to the African continent. Red and black molten volcanic “pimples” protruding from the rolling landscape as remnants of the bubbling lava; here and there stray lumps of stone once spat out by the earth and fall from the sky in an all-destructive rain of molten rocks.

A landscape where it was not good at the time of the eruptions. That was for sure.



Montañas del Señalo Location



Rogier, Rik and Laurens in the land of the volcanoes. (Photo Lisette de Graauw)

The access to the Montaña del Señalo is on the road between Parque Nacional de Timanfaya to Mancha Blanca. Via a small footpath leading through lava fields you can reach the southern flank of the Señalo after about 1 hour of walking.



Overview Fumaroles at the Montaña del Señalo 1 to 4 are open. 0 = closed

The discoveries

Closed fumaroles:

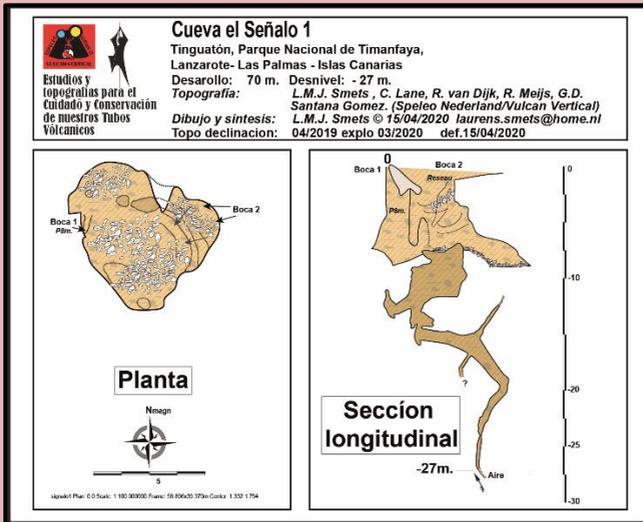
The fact that you find an open fumarole in which you can descend with a rope is a special feature in itself. Most Fumaroles that are known are closed immediately or after a few meters. Either they are too narrow or they are filled with molten or “gritty” rock..



Laurens in 2 closed fumaroles (number 0 in the overview map) explored on an earlier prospecting tour with Chris Lane (photographer) on the south-east flank of the Montaña del Señalo in 2019

Cueva el Señalo 1.

This fumarole has 2 entrances. A real "open" fumarole, a vertical shaft of 8m. that leads to a chamber of about 10 x 10m. ; opposite one can climb out freely via Boca 2 (=mouth in Spanish).



Survey of Cueva el Señalo 1



Climbing out of Boca 2 (Photo Laurens Smets)



mineral found at -27m. in Señalo 1 (Photo Laurens Smets)

In the middle of the room of El Señalo 1 there is a hole in which one can free climb down and after crawling through some narrowings to the deepest point of -27. This deepest point was also the place where we found a mineral-like rock of about 10 x 10cm.. which was sampled for further investigation. Research by the local Geologe Leticia Pacheco Cabrera showed that this sample turned out to be a combination of Thenardite (Na_2SO_4) and Mirabiliet ($\text{Na}_2\text{SO}_4 \cdot 10\text{H}_2\text{O}$). This last one is also called Glaubersalt. Which is described as a mineral found typically but also rare in Fumaroles.

Thenardiet

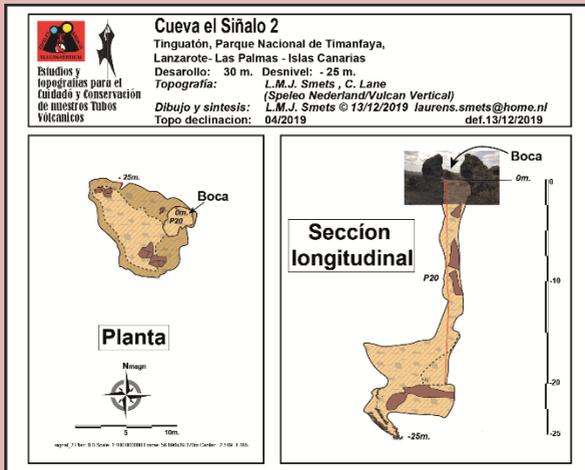


Mirabiliet



Cueva El Señalo 2.

You can't miss the entrance to Señalo 2. It is located in the middle of the path on the southeast flank of Montaña del Señalo. 2 excellent blown up fumarole walls characterize the entrance with in their midst a beautiful red eroded 20m. shaft. As with most volcanic caves, the walls are very fragile here. Even more fragile than that of a lava tunnel. A thin shell of a few centimeters with soft sinter rock underneath. Due to the various minerals raised from the earth, a shade of colors with beautifully colored green and yellow lightens the entrance area.



Survey of Cueva el Señalo 2

Volcanic caves are a very fragile environment. Much more vulnerable than a limestone cave. A visitor **ALWAYS** leaves traces, no matter how careful you are. In lava tunnels you leave a trail of collapsed stones and broken floorboards. No matter how sturdy something looks, make no mistake. **EVERYTHING** is brittle and just a crusty solidified lava/earth/grit mixture. You also leave direct footsteps in the crust or in the dust on the walls and floor.

In short, especially the fragile Fumarolles you have to visit just once for research, exploration and reporting and actually after that please keep out.



Descending into the 20m. deep shaft of Fumarole 2.. It's impossible to put bolts or hooks in the rocks. The moment you drill a hole, you shoot after 1 or 2 cm, in a hollow or brittle space. During descending, anything can break down. Therefore also 1 man down, explore, measure and never enter again. (Photos Laurens Smets)

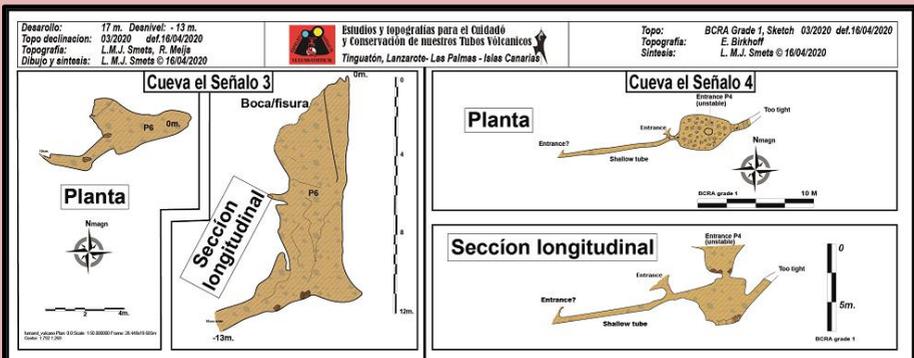
Cueva el Señalo 3 and 4

These are some smaller fumaroles where number 4 turned out to be a somewhat more combination-like version. A kind of Fumarole that has started to spew lava after its water/steam phase, creating small lava flows on the outside.



Lava flow at Fumarole 4 (photo Lisette de Grauw) Erik and Rogier at the entrance of Fumarole 4 (photo Laurens Smets)

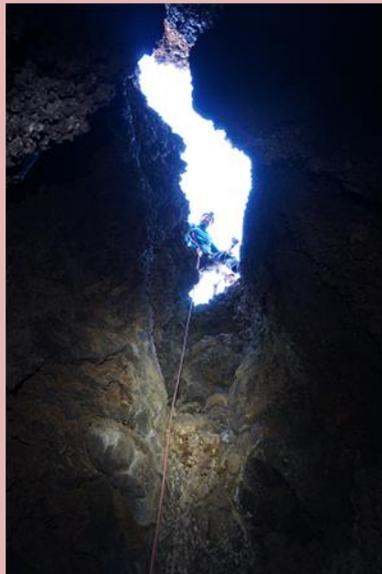
The cave turned out to be very unstable with multiple entrances. At the slightest thing you touch something, a piece of the roof can quickly come down. Erik decided to make a quick sketch and keep this cave in mind.



Survey of Cuevas el Señalo 3 & 4

Señalo 3 was situated some 100 m. further further east near a small side crater. The cave is fissure-like shaped similar to the deepest Geyser shafts on Lanzarote the Simas de Tinguaton or del Diablo (-101m.) , also explored by us a few years earlier.

The shaft of the Fumarole 3 turned out to be 13m. deep.



Erik , Lisette and Rogier at the entrance of Fumarole 3 (Photos laurens Smets)

Thanks to all participants for realizing these explorations

Speleo Netherlands: Rick van Dijk, Lisette de Graauw, Erik Birkhoff, Rogier Meijs, Laurens Smets

Vulcan Vertical Espeleologia y Barrancos: Gustavo David Santana Gómez

The Craven Pothole Club: Carmen Smith

The 19th International Symposium on Vulcanospeleology

A report by Franz Lindenmayr

*Translated from Franz's original report in German with the help of
Professor Google*

The 19th International Symposium on Vulcanospeleology took place in Catania, Sicily from 28 August to 3 September, 2021.

What sounds so simple, it wasn't at all. At first everything seemed to become routine, but then Corona came and changed the whole situation. First there was the horror news from northern Italy, the pictures of military trucks transporting an unknown number of dead through the night, then more and more regions of Italy got the colour red (we were affected by it because we had planned a short trip to Lake Garda) and finally all of Europe became more or less "restricted area", then the whole world. Everywhere the freedom of movement of people was massively restricted. How high would the numbers go up? The general isolation was prescribed to us as the best way out of the bad times. The borders were closed, all gatherings except for the closest family association were banned.

In the summer of 2020, things seemed to get better again, but then the next wave came and the cases of illness soared higher than ever. Then came the vaccinations, fortunately means were found that work, for other important diseases humanity still does not know much, and gradually, at least for the moment, the situation is "stabilizing" again.

To host an international conference in such a biological-social climate puts the organizers in a very difficult to manage situation, almost everywhere variable that cannot be influenced. They try anyway and it is to be hoped that everything will go smoothly and smoothly.

The situation is also difficult on the part of the participants. There are still countries with high incidence figures from which those interested cannot leave at all. After all, for the fully vaccinated today there is the electronic vaccination confirmation with which, hopefully, you can get both the journey and the participation in the symposium pretty smoothly. It is different with the non-vaccinated. They have to prove their "harmlessness" by means of appropriate tests - before the trip and then again when they want to go home again.



Participants of the symposium at Piano Provenzana, note masks worn to reduce chances of spreading infection (Photo Franz Lindenmayr)

Particularly delicate also is the arrival (we think about the departure when it is due). If you had booked a flight early on, ie to secure a possibly cheap airfare, then it would be very difficult to predict what would happen if you did not take the flight. In case of doubt, you have paid and then had none of it, if you had not taken out the relatively expensive insurance in this regard beforehand.

Since I knew about the second appointment, I thought about when and with whom I should book. In addition, a speleologist friend from Switzerland wanted to fly along. Prices in Germany are usually a considerably lower. It became a memorable experience. Various Internet services offer their services in this regard. I tried KAYAK and SKYSCANNER. I was flooded regularly with loud basically superfluous mails, which informed of a constant fluctuation in the prices. None of this has brought anything and was just quite a waste of time, even a form of time theft. The price for a return flight was consistently over €450-500 euros, in the end at €600. You can see this on the background that ALDI offers a complete 15-day trip to Sicily for the price of €849.

In the end, I decided to book with lastminute.de at a price of about €400, about two-hour flight for round trip with Lufthansa, including a real piece of checked luggage and at civil flight time!

It is worthwhile not to go into the next best offer, but to critically examine the fine print, which makes even the travel preparation an adventure. €400 is already high, which is also recognizable by the fact that prices below €100 are advertised - but on terms that border on dubiousness, such as flying from an inconvenient regional airport and you are restricted to taking just a handbag with you.

In addition to the transport costs, the costs for participation in the symposium are €240 registration fee, for the cave excursions, €10 euros for the half-day tour and €20 for the whole day, €10 euros insurance fee per day, the hotel prices per night range up to €120 euros in a single room, and.....

There are two types of participants: those who arrive in person and those who follow what is happening via the Internet. They each receive a code the day before so that they can establish a suitable connection. The lectures are electronically recorded and transmitted.

For the first time, I wanted to contribute to the program myself. There is no better place than Catania than to remember Empedocles. If you look at it generously, then he was the "first volcano speleologist". No matter if the stories are true, maybe 2500 years ago a person jumped into Mount Etna to find out what happens when you do something like this. Seems completely crazy to us, but he had described himself as God, and gods were immortal, so he would have to come back once and then tell what you would experience. And this is the beginning of my lecture: "Down the crater - from Empedocles to Arni".

On Saturday, August 29, 2021, it started. I was curious.

The event has now successfully concluded. Many are already back home, but some extended their stay in Sicily by a few days. This is understandable, because if you fly halfway around the world, then a few days in Catania and the surrounding area are not much.

The circumstances under which this 19th International Symposium on Vulcanospeleology took place were extremely unfavourable. Actually, it had been planned for 2020, but then COVID came and threw everything into disarray. Actually, for example, it had been planned to travel to the Aeolian Islands for a few days after the conference and to study the phenomenon of volcanism and the resulting cavities in the rock. Cancelled. A week of looking around in the caves of Etna. Cancelled. The aim was to have many visitors - the maximum limit was once set at 80 people. Far from it.

In the end, most of the visitors stayed at the 8Room Hotel in the middle of Catania. This made the transport much easier, because the 2 buses being used to transport everyone mostly had to make only one stop. Also, because of Covid requirements, the buses could not be fully loaded as we had to leave an empty seat between adjacent passengers. From the Hotel the University of Catania on Corso Italia was within walking distance. For the excursions and the evening events, small FIAT buses were available and very skilled drivers. In the centimetre range, the distance between the many vehicles sometimes moved, the exterior mirrors were often folded in. Nevertheless, we did not see a single accident. On foot, the beautiful old town could also be reached in a quarter of an hour. There are far too few parking spaces anyway.



8Room Hotel, Catania (Photo Franz Lindenmayr)

Between the congress events there was a lot of time available, which you could use as you wish. For example, you could dine extensively in one of the many local restaurants with some of the other symposium participants, who had just as much time available. Some wanted to go swimming in the sea, which was possible, but only in selected places, as there are few bathing opportunities on the basalt cliffs.

In the Chiesa di San Nicolo l'Arena near the city centre of Catania, the effort had been made to organize two small exhibitions, one about Fingal's Cave on Staffa, probably the most famous basalt cave in the world, and a photo exhibition about 80 years of Gruppo Grotte Catania. In addition, Carlos D'Agostino exhibited some paintings and a cave map. A church is a presentation room with prestige and therefore already suitable, but today only a few get lost there. Anyway, I was the only one when I was there and I wasn't surprised.

Of course, the lectures are central to such a symposium. They were grouped into three morning blocks and were shown in a lecture hall in the Geology Department of the University of Catania. Covid regulations were carefully adhered to and every visitor had to register and was checked with an electronic thermometer, every day. Most of them were still wearing their masks in the lecture hall, which was quite uncomfortable. At least the lecturers were able to remove them.

A great novelty was that some participants were connected via the Internet, so that four continents were at least visually and linguistically connected to each other. That took a lot of work and most of the time it worked. However, there were always disturbances and until they were sorted out there were delays, which required a lot of patience from everyone. The best attended was the first morning, then the numbers reduced. The organizers had also arranged attractive excursions that were preferred by some who were not hard core vulcano-speleologists.



International connection: Europe, Australia, Asia, America (Photo Franz Lindenmayr)

The event started on Monday, 30 August at 9.30 a.m. with a series of opening words, starting with an introduction by Roberto Conti. Then George Veni, the current chairman of the UIS, who was recorded with phantom image on the screen. Afterwards, Volcanic Caves Commission Chairman John Brush opened the symposium from far off in Australia. Stephan Kempe gave the first technical paper with a presentation on the "Evolution of Lava tubes", a lecture that came live from Germany. He passionately advocates that we should no longer use the term, but instead say "pyroducts" to it. We continued with lectures on the geology of Mount Etna and the "Grotta del Gelo", the 100 m long ice cave. This was concluded by reflections on the temperature that must prevail in order for tree trunks to burn in lava in caves at Mr Fuji in Japan and thus create corresponding cavities. Then there was time for lunch, the afternoon event, a city tour through Catania and to the Greek and Roman remains in it. Some preferred to do other things.

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On Tuesday there were another 4 hours of lectures (Armenia, Jeju Island/Korea, small caves on Mount Etna, life in volcanic caves, mushroom finds in Etna caves, long-eared bats). On Wednesday it was a long morning with many presentations: Al-Fahda Flow, Jordan, small caves on Mount Etna, caves on the island of Pantelleria, mining of volcanic material in underground quarries, the Nam B'Lang Volcano in Vietnam and my contribution of 2 lectures: a history of vertical volcanic cave research – “From Empedocles to Arni” and “Lava caves are boring”, only pictures with music.

On Wednesday afternoon just before the lunch break there was a meeting of the Commission and consideration of future of the International Vulcanospeleological Symposia. Where could it take place? In fact, there was an elaborate concept from Vietnam, who wanted to be the organizers as early as next year. After some discussion, this was voted on and it was clear what the result would be: Vietnam. Something better could not have been decided. And the next place? Iceland maybe or even Argentina? Hopefully we will all experience it.

The lecture program is a focus of these meetings. In addition, the excursions and the culinary highlights are important reasons not to miss any of these meetings.



Lecture Programme in Progress (Photo Roberto & Olga Conti)

We had 3 day excursions on the program: On Sunday around Mount Etna by bus and geological stations worth visiting, on Thursday a hike from the Etna Road to the Valle del Bove and on Friday finally a cave day. We could choose between half day and full day tours. I chose the half day trip and our small group drove to Monte Gallo on the west side of Mount Etna. The area was quite wild and is probably not visited very much. Without precise local knowledge, it is quite difficult to identify the entrances.



Pitagora Cave (Photo Roberto & Olga Conti)

We visited the Grotta Intraleo, which has 2 sections and is located just a few metres below the surface. In one direction, there is a horizontal passage in which an altar and a white-painted cross form a kind of cave church. On the other side, the tunnel is divided into two levels, one lower and one upper. The Pyroduct soon splits into three branches, which we followed until it became too uncomfortable for us, because it would have required crawling over the very rough floor for just a few more metres of passage. There was no sign of a continuation. In the ceiling there were some crevices through which all sorts of roots penetrated from above. Apart from spiders, we were not able to observe any other living creatures.



The "Altar" in Grotta Intraleo (Photo Ed Waters, taken in 2009)

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Nobody lost weight on this trip and it would have been the wrong time to strive for something like that in Catania. At the beginning and at the end we were invited to Scammacca's farm and were simply spoiled with delicious local food and the finest Sicilian wine. The operators of the Rifugio Citelli brought the best out of the kitchen and conjured up a wonderful lunch on the table that could not have been better and more. And at the gala dinner in the restaurant Al Mulino on the Gulf of Campomulini, there was the most wonderful seafood from the local waters. And what a good granita is, we got to know when there was a 'big lick' on the terrace of the clubhouse of the CAI in Catania. Since you could also overlook the fact that the hotel breakfast was just simple - and for 6 days in a row, always the same selection.



Evening food at Scammacca's Farm (Photo Franz Lindenmayr)

Finally, the most important thing is that it is not only for me that the most important thing is to meet the other people from many countries who come to this and similar events. "It is important to do an identity-creating thing together" (Kollberg, M.). This is exactly what happens here, and the relatively small group size compared to other large-scale speleological events is very conducive to this. Language skills, especially English, are particularly important as a lingua franca. Otherwise, unfortunately, you sit around alone a lot, while the others may be wondering with laughter.

Finally, the most important thing is that it is not only for me that the most important thing is to meet the other people from many countries who come to this and similar events. "It is important to do some identity-creating thing together" (Kollberg, M.) This is exactly what happens here, and the relatively small group size compared to other large-scale speleological events is very conducive to this. Language skills, especially English, are particularly important as a lingua franca. Otherwise, unfortunately, you sit around alone a lot, while the others may be wondering with laughter.

It remains only to thank the organisers. The Italian speleologists made us feel really welcome and they worked until we dropped. One in particular, without a doubt, is Giuseppe Priolo. He was the mastermind behind the event.

It's nice that it continues. Soon - if everything works out, then in Vietnam. Corona didn't knock anyone down. At least that's what it looks like at the moment.

Links:

www.19isvetna.com, 19th International Symposium on Vulcanospeleology, 2021

<https://www.19isvetna.com/symposium.php>

<http://www.vulcanospeleology.org/>

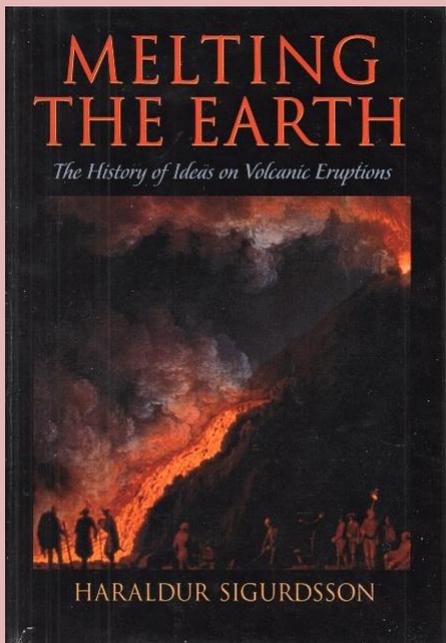
<http://www.gruppogrottecatania.it/>

<http://www.blasco.scammacca.name/>

<https://www.lochstein.de/hrp/themen/down/down.htm>

Melting the Earth

A Book Review by Martin Mills



Melting the Earth: The History of Ideas on Volcanic Eruptions by Haraldur Sigurdsson. Pub. 1999 by Oxford University Press Inc, New York. 260pp. ISBN 978-0-19-510665-7

This is perhaps a somewhat overdue book review but I have only just stumbled upon it. During the shielding/various lockdown scenarios I have been catching up on neglected reading/writings.

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As I recall Arní Stefansson took us to the author's Volcano Museum at Stykkisholmur on the Snaefellsnes Peninsula in Iceland in 2012 and we took John Brush and Marj Coggan back in 2015.

This is a fascinating and detailed book taking us in 16 chapters, detailing in 229 pages of text, from Homo Erectus 600,000 years ago through the Stone Age, the Plinian Eruption of Vesuvius in 79 AD and the Roman Empire, the Settlement of Iceland, the Renaissance, the Neptunists, the Plutonists, the Volcanologists, Chemical Reactions as the source of Heat in the Earth, Fluid to Solid Earth, Melting by Decrease in Pressure, Radioactive Heat and Convection, to finish with what Space Exploration is revealing.

All illustrated by 10 figures/maps and over 60 b&w engravings, 17 pages of over 300 references to get stuck into, a Glossary of Volcanic Terms and vital Index bringing the work up to 260pp in all.

As one who has never even studied geology I was beginning to struggle with the plot towards the end especially given the number of separate Sciences established: Geodynamics, Hydrogeology, "Hydrostatics", Petrology, Seismology

Martin Mills

September 2021



ORGANIZING TEAM

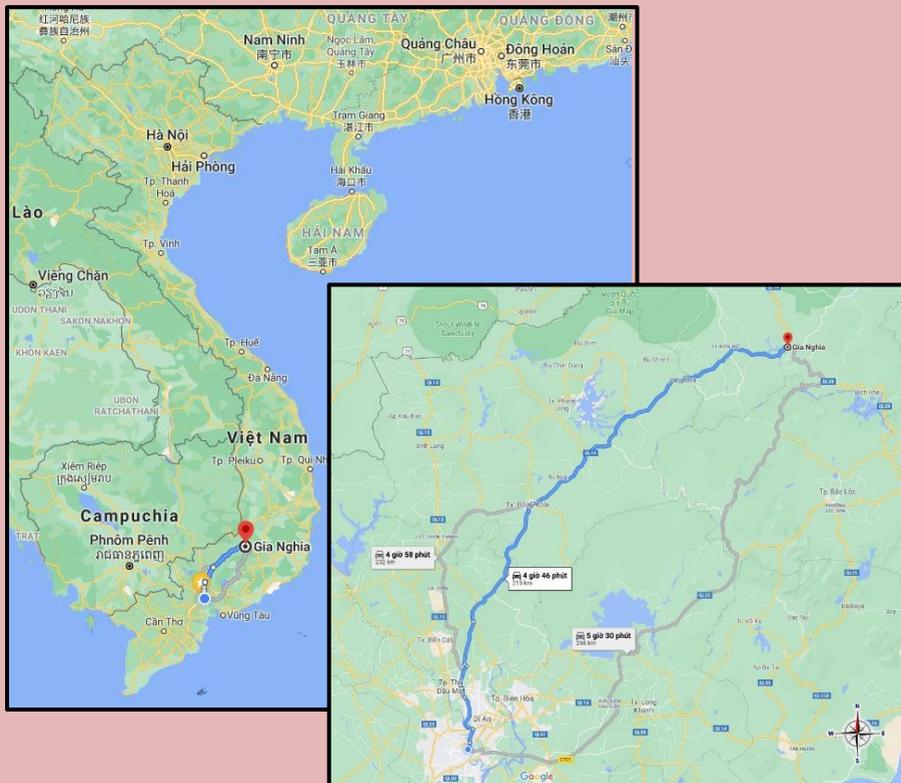
The symposium will be organized jointly by Dak Nong Provincial People's Committee (Dak Nong PPC), Vietnam Institute of Geoscience and Mineral resources (VIGMR) and Vietnam National Museum of Nature.

PROPOSED TIME: Early November, 2022.

LOCATION

The 20th ISV will take place in Dak Nong UNESCO Global Geopark, Dak Nong Province. Dak Nong is located in south-central Vietnam, about 250km northeast of Ho Chi Minh City.

The maps (on the following page) shows the direction from Ho Chi Minh City to Gia Nghia City (Dak Nong Province)



The geopark was established in 2015 and was designated as a UNESCO Global Geopark in July 2020. It covers an area of 4,760 km², including 5 districts and 1 city, out of 8 districts of Dak Nong Province. Highlights of the Geopark are the lava tube system, several young volcanoes and waterfalls as well as many other geosites, national parks and nature reserves.

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PROPOSED SYMPOSIUM PROGRAM:

Time		Activity	Place
Day 0		Minibus from the airport to registration desk and hotels	
	Evening	Icebreaker event	At Lodge Resort
Day 1	Morning	Opening ceremony and beginning of work sessions - coffee break incl.	At Lodge Resort
	Afternoon	Opening of the exhibition: "..."	At Lodge Resort
	Evening	Welcome party – Cultural show	At Lodge Resort
Day 2	Morning	Lectures and work sessions - coffee break incl.	At Lodge Resort
	Afternoon	Visit Dak Nong UNESCO Global Geopark Information center and EXPLORASOUND .	Gia Nghia City
Day 3	Morning & Afternoon	Guided caving trips to P20, C8, C9 – Lunch incl.	Krong No District
	Evening	Gala Banquet & Cultural folk show	
Day 4	All Day	Guided caving trips to C3, C6.1, C7 – Lunch incl.	
Day 5	Morning	Meeting of the Commission on Volcanic Caves Recent discoveries video or slide presentations	At Lodge Resort
	Noon	Closing ceremony and Farewell party	At Lodge Resort

GETTING HERE

In general, the best way to reach Dak Nong Province is by plane. Tan Son Nhat International Airport (in Ho Chi Minh City) or Buon Me Thuot Domestic Airport (Dak Lak Province) are the closest airports to Dak Nong Province. The Organizing Committee will provide shuttle buses from 2 these airports to pick up delegates to the Symposium. It takes about 5 hours from Tan Son Nhat International Airport and 2 and a half hours from Buon Me Thuot Domestic Airport to the organizing place in Dak Nong Province.

To reach Buon Me Thuot Domestic Airport (Dak Lak Province), delegates need to transit from Tan Son Nhat International Airport (in Ho Chi Minh City), Da Nang International Airport (in Da Nang City) or Noi Bai International Airport (in Ha Noi City).

If you want to reach Dak Nong Province by bus from other cities/provinces in Vietnam, you can check this website <https://vietnambustravel.com/>.

VIETNAM'S VISA POLICY FOR TOURISTS

This content will be updated.

LODGING

Lodging is not included in the Symposium fee, except night 3 and night 4 in Krong No District. Participants can choose their preferred solution using for example, “booking.com”.

There are some highly-recommended options that are near the symposium venue, these are listed on the following pages.

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Property	Reserve Rooms	Address	Price/night	Note
Lodge resort	50	Nghia Trung Ward, Gia Nghia City Phone: 0988.935.866	800.000 VNĐ (\$US35)	The venue of the symposium
Rose Hotel	40	Nghia Trung Ward, Gia Nghia City Phone: 0913.550.780	500.000 VNĐ (\$22)	
New Sunrire	47	Dien Bien Phu, Street, Gia Nghia City Phone: 0987.979.768	500.000 VNĐ (\$22)	
Victory	22	216, 23/3 Street, Nghia Trung Ward, Gia Nghia City Phone: 0987.979.768	500.000 VNĐ (\$22)	
Hà Nội Phố	32	Le Thi Hong Gam Street, Nghia Duc Ward Phone: 0973.686.715	400.000 VNĐ (\$17)	
T79 Guest House	30	Street 23/3, Nghia Duc Ward Phone: 0973.686.715	500.000 VNĐ (\$22)	
Provincial guesthouse	67	25 Le Lai Street, Nghia Trung Ward, Gia Nghia City Phone: 0917.473.379	400.000 VNĐ (\$17)	
Hồ Tây	10	115, Phan Dang Luu Street, Nghia Trung Ward, Gia Nghia City Phone: 0949.844.242	400.000 VNĐ (\$17)	

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Hòa Yến	30	159, Ton Duc Thang Street, Nghia Thanh Ward, Gia Nghia City Phone: 0988.333.767	600.000 VNĐ (\$26)	
Minh Sang	20	54, Chu Van An Street, Nghia Thanh Ward Phone: 0977.377.999	500.000 VNĐ (\$22)	

MEALS

With the exceptions of the Welcome Party, the Gala Banquet and the Farewell Party, meals are not included in the Symposium fee.

Dak Nong UNESCO Global Geopark offers a large variety of restaurants, food inns and bars.

A packed lunch is included in the guided caving trips.

**** There are some suggestions:**

1. Lodge resort – Nghia Trung Ward, Gia Nghia City
2. Huong Lieu Restaurant – Ton Duc Thang Street, Nghia Trung Ward, Gia Nghia City
3. Hoa Mai Restaurant – Dien Bien Phu Street, Nghia Trung Ward, Gia Nghia City
4. Son Ma Restaurant – 3/2 Street, Nghia Tan Ward, Gia Nghia City

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REGISTRATION

The registration procedure will be available on-line, on the Symposium website, by July 2022. It will be possible to pre-register free to get priority to attend to the Symposium in case registration requests exceed the maximum limit.

Registration fee is estimated at \$US250 and includes:

- 20th ISV booklet
- Transport from and to the airport
- Welcome Party
- 2 night stay in the Krong No area
- Gala Banquet
- Farewell Party
- Cave rescue Insurance
- Proceedings of the Symposium (on paper book or USB key)

For accompanying members, the fee is reduced to \$200, not including the proceedings book.

To encourage student's participation to the lectures, the organizing team decided to create a special pass, valid only for the lectures and work sessions on days 1, 2 and 5. This special student pass cost \$US50 and includes:

- 19th ISV booklet
- Attending lectures and work sessions
- Proceedings of the Symposium (on USB key)

EXCURSIONS

A – Guided caving trips during the symposium General information

The density of lava caves in Dak Nong UNESCO Global Geopark is extraordinary. C7 Cave, 1,067 m in length, is the longest pyroduct known in the afore-mentioned geographical boundaries. Several other caves rank next on the list of SE Asia's/China's longest lava caves, like C3+C4 Cave (968 m, segmented), C8 Cave (791 m).

Another cave mapping project took place in 2018, bringing the number of mapped caves to 49 and the total of known cave passages to just over

10.1 km. All the volcanic caves known in Dak Nong Geopark appear to be developed in the Pleistocene-Holocene basaltic flows. The caves in Dak Nong Geopark generally do not have bad air, although the less ventilated caves are humid and have a relatively higher air temperature.



Map of the volcanic caves distribution in Dak Nong UNESCO Global Geopark

During the 2018 project bio-speleological investigations were made. These were the first investigations of its kind in the Geopark. First identifications by specialists indicate several new species of spiders from the caves.

Following are the short description of the selected caves.

C3+C4 Caves



This is a segmented pyroduct featuring a main gallery of significant size (up to 20 m wide and 15 m high). The cave has a NW segment (NW of the C3 roof collapse; about 300 m long), a middle segment (between the C3 roof collapse and the C4 roof collapse/main entrance; 280 m long), as well as a SE segment (SE of the C4 roof collapse/main entrance; 150 m long). The latter segment has a large skylight (roof collapse) not far from the upstream end of the cave. There are only a few oxbows and short side leads close to the C4 main entrance and in the NW section of the cave (C3 Cave).

The central and the SE segments have a lot of boulders, whereas the NW segment often features cauliflower and rope lava on the floor. A tree mould was found by the explorers in the wall of C3 Cave. The passage size in the NW is generally smaller than in the other cave segments but still allows for upright walking until the passage flattens out in the NW with the low crawl not pushed to a conclusion (no draught).

Several archaeological artefacts were discovered near the main entrance to C4 Cave, including pebble materials, axes, stone flakes, anvils made from riverine pebbles, a piece of opal-chalcedony. Also found were crude potteries, small pottery pieces of 2-3 mm showing decoration similar to those observed on ceramics of the Neolithic Age in the wider area dated to 4,000-5,000 years ago.

Due to the ventilation between the several entrances the air inside C3+C4 Cave is good. In combination with the easy access, the partly very impressive size of the pyroduct and the scenic roof collapses C3+C4 Cave is suitable for eco- tourism.

C6.1 Cave



The main and single entrance to this S-N-directed cave is situated only 200 m from the new concrete trail built in the Dray Sap forest area. C6.1 Cave was surveyed by NPO in 2015 (Honda et al. 2015, survey). The 20 m wide and about 7 m deep (climbable) roof collapse separates a singular southern cave passage (about 100 m long) from an approximately 150 m long northern cave section, which consists of a main gallery that gradually declines in size, as well as a smaller side passage; both passages join in a terminal chamber with a lot of breakdown. The main northern gallery is 10-15 m wide and 10 m. The cave became famous due to the archaeological excavations, including tools such as oval axes, blade-sharpened oval axes, blade-sharpened short axes, stone flakes and potteries.

In 2018 human bones were discovered by the archaeological team. They imply human settlement in these caves at least 6,000-7,000 years BP.

C7 Cave



This is the longest pyroclastic flow in all SE Asia and as such an outstanding geoheritage site. The cave is SE-NW-directed and has one singular, 11 m deep roof collapse which requires rope (or a cable ladder) to descend. The collapse hole is scenic due to the vegetation growing at the boulder cone below. The roof collapse does not segment the pyroclastic flow as the collapsed part of the ceiling does not comprise the entire width of the cave passage below.

The SE section of C7 cave is much branched with up to three parallel galleries, which are interconnected by smaller passages. Towards the NW an extensive series of less branched galleries continue. There are two large oxbows with the second oxbow re-joining shortly before the cave terminates at its extreme NW end. The floor of the cave is covered by cauliflower lava, rope lava, as well as breakdown in places. Most of the galleries in C7 Cave are of walking size. However, towards their end most passages tend to become low and flatten out.



Although no detailed biospeleological investigations were carried out yet in C7 Cave, it is supposed that cave life is diverse as a considerably large bat colony inhabits the cave. Due to the lack of other entrances or skylights ventilation inside the cave is limited, which leads to air that is partly damp and humid.

P20 Cave



A 25 m deep vertical pitch, which is interpreted to represent a gas escape vent (hot puka), leads down into a main pyroduct (up to 20 m wide and over 10 m high in average) which is SE-NW-directed. There is only minor breakdown in the cave. The NW end of the cave continues in a very narrow crawl. The SE terminal cave section is almost entirely filled up with lava and only a low space between the infilling and the roof allows to proceed to the end of the pyroduct which is somewhat larger and branched. The cave has many small lava stalactites on the ceiling and lava ripples along the walls. In the upstream part of the pyroduct a feature was noted that could be interpreted as a tube-in-tube.



C8 Cave



The current entrance to C8 was originally a very wide area of roof collapse (the diameter > 20 m), surrounded by green vegetation all year around; The main cave floor is lower than the surface area of about 13 - 15 m. Before going down to the cave, there is a cavity call cleft shelter commonly observed in in pahoehoe formation.

C8 is located very close to Chu B'Luk volcano, and was formed from the upstream of the lava flow originating in this volcano. The lava flowed with high volume velocity and temperature, low viscosity, rich in volatile matters, and discharged into a relatively flat valley in the sub-longitudinal direction. The amount of gas in the lava tube accumulated and formed large domed gas reservoirs along the cave ceiling in the upstream. Eventually, gas spouted out of the ceiling of the gas hall, formed a skylight, through which the lava stream flooded into the cave and created a lava fall.

The upper part of the cave also developed several lava windows, through which a considerable amount of lava also continued to flow into the cave, gradually fill up these then the windows, and formed lava seals. C8 is also characterized by formation from lava's breaking through the cave walls

As the lava flow progressed downstream, it were affected by the paleo-valley terrain, then divided into two branches: The main channel developed along the main valley with the cave chambers' continually enlarging to an elliptic shape as the cave floor at this section were raised. The sub-branch headed towards northeast and was characterized by its coarse floor - the product of sluggish A'a being blocked before exiting to the outside. Although originating from the same lava flow, the differences in size and characteristics of speleothems in the two caves in the sub-branches in the downstream of C8 clearly reflect the impacts of the paleo-terrains on their formation and features.

C9 Cave

C9 is typical for caves created by lava flows with large volume, high temperature, low viscosity, which produced large lava cave with an elliptical cross section. C9's floor is clinker-type, relatively wet, but covered by a thin layer of volcanic ash. On the cave floor there is a lava flow trace with a longitudinal stripe parallel to the development of the cave.

Although limited in length, C9 is still considered a large cave, as the maximum cross section of C9 and its entrances are quite wide among lava cave within Dak Nong Geopark. The cave has a high ceiling (up to 12 meters) and a large arch. The floor lining of C9 cave are about 70 - 80 cm in thickness, and considered to be thickest among those within Dak Nong Geopark. On the northwest cliff of the northern downstream, beautiful ribcage-like stalactites can be observed. In the northern entrance area, there is a short wall with lava exit points and many unique formations, such as pahoehoe, python-like pahoehoe on the ceiling layers at the southern entrance of the cave; rope-like, drape-like, fan-like stalactites, etc. Especially, near the entrance of this niche, there is a lava plate which reflects clearly many generations of lava, which are evidence of episodic nature of the volcanic eruption that have created the C9.

B – Post symposium

TRIP 1: TREKKING TA DUNG SUMMIT



Introduction:

With a total trekking distance of 26km, Ta Dung Peak trail is considered as the truly adventure for participants with the paths contain many steep curves.

Ta Dung National Park is located on the border of two provinces - Dak Nong and Lam Dong, in the center of the Central Highlands of Vietnam, is a primeval forest with an average altitude of 1,200 - 1,500 meters, embraces the Peak of Ta Dung Mountain which is reaching up to 1,982 m compared to sea level. Ta Dung National Park is placed in a key region of economic, environmental security, where sequestrates carbon, reduces greenhouse gas emissions, protects and maintains the ecological balance for the whole area.

Additionally, this National Park is the watershed of Dong Nai River that contains protection forests. The river supports to moderate and supply water to domestic uses, industrial and agricultural producing and electricity industry. It is determined as the green lung of Dak Nong province. With the features of humid tropical forest at low mountains, Ta Dung National Park witnesses as a template of rare and precious primary forest ecosystem in highlands, filled with endemic, genes of flora and fauna only found in Central Highlands of Vietnam.

Itinerary:

Day 1:

Depart from Gia Nghia City at 8:00 am, we will pass by a village of the Ma - indigenous people in the Central Highlands, they have lived in this area for thousands of years. Arrive at the campsite at about 6:00 pm at the height of 1700m, enjoy the cuisine made by the locals and spend the night in tents.

Day 2:

Wake up at 5:00 am, enjoy breakfast together and walk to the top of the mountain after 30 minutes. Ta Dung Peak is where Dr. Yersin observed Lang Biang Plateau on his 3rd journey in 1893, from then he detected Da Lat area nowadays. When you reach the top, it will be difficult to see the view because of dense forest, but you can observe at the panorama points, also try to look for interesting words engraved on the rocks on the top from year 1959. On the way back, you will discover the biodiversity of the forest in different levels through the vegetation. You will arrive at the mountain foot around 4:00 pm, have dinner together and return to Gia Nghia city

Quotation:

- Group 4 to 10: 180 USD/pax
- Group 11 to 20: 150 USD/pax

Inclusions: Food, Water, Camping Gear, Insurance, Rain-coat, Medicine

Exclusions: Personal items, Personal trekking Gear

TRIP 2: NAM NUNG FOREST DISCOVERING BY MOUNTAIN BIKE



Introduction:

Nam Nung Nature Reservation is located in Dak Nong Province, about 40km from Gia Nghia City, it plays an important role in climate controlling for the Central Highlands. Nam Nung Forest stands out with the characteristic of Vietnam's rain forest.

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With an area of more than 20,000 hectares, Nam Nung Nature Reservation embraces a typical tropical forest with extremely rich characteristics. In that primeval forest, the Nam Nung Mountain range divides the climate of Dak Nong into two regions, the south is cool and temperate and the north is hot and dry. Therefore, this mountain range witnesses an important role in the ecosystem development of Nam Nung.

Itinerary:

Day 1:

Depart from Gia Nghia City at 10:00 am and arrive the forest gate at 12:00am. After that, you all will get bikes and start cycling into the forest. Having lunch with forest ranger prepared by them with special cuisine from forest (Veggies and Fish)

The group arrive at Bear Waterfall about 15:00 pm, set camp along the stream and enjoy the fresh nature

Day 2:

After enjoying coffee and breakfast, join our walk along the Dak P'ri Stream with an extremely wonderful 7km distance heading to 7-Storey Waterfall. This is the route that you can go through many beautiful streams and small rapids. Dak P'Rí Stream has more than 30km length, intersects Nam Nung Natural Reservation and is very diverse in shape and flow, sometimes winding, sometimes long and straight. Its water is sometimes intense and sometimes soft.

Coming to the 7-Storey Waterfall, you will absolutely feel amazing since this is the most majestic waterfall in the Central Highlands. It highs up to 70m and several levels, you can stand on the top of the waterfall and now, pull out your climbing gear and start to descend from this point to the bottom.

Returning to the campsite at noon, you will have a snack and move back to the forest door, then heading to the center for dinner and hotel.

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Quotation:

-Group 4 to 10: 200 USD/pax

-Group 11 to 20: 170 USD/pax

Inclusions: Food, Water, Camping Gear, Insurance, Rain-coat, Medicine, Mountain Bike

Exclusions: Personal items, Personal Climbing Gear

Climbing gear rental fee: 30 USD/pax

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TRIP 3: GIA NGHIA 1 DAY CITY TOUR

Schedule: Depart at Gia Nghia City, from 7:30 am to 5:00pm



Gia Nghia Tea Hill

Pick up guests at hotels – Travel along the banks of Dak R'tih Hydroelectric Dam to Petrified wood Exhibition House – Enjoy coffee by the hydroelectric lake – Visit an orchard – Have lunch – Visit a small but very picturesque waterfall at Dak R'tih stream – Visit Tea hill – Drop guest off at hotel or designated location.

Quotation:

- Group 4 to 10: 80 USD/pax
- Group 11 to 20: 60 USD/pax

Inclusions: Food, Water, Café, Insurance. **Exclusions:** Personal expenses.

TRIP 4: EXPLORE “SOUNDS FROM THE EARTH” – 1 DAY TOUR



Ta Dung Lake Cruise



Granite Waterfall



Dong Nai 3 Hydropower Dam



Ta Dung Panorama

Schedule: Depart at Gia Nghia City, from 4:30 am – 5:00 pm

Pick up guests at hotels – Depart for Ta Dung Lake Cruise to watch the sunrise & enjoy coffee on the boat – Visit a fish farm on the lake and learn about local life and aquatic species – Dong Nai 3 Hydropower Dam – Granite Waterfall – Visit Ta Dung Panorama cafe for lunch – Visit the Lithophone House (the place exhibits a collection of the earliest musical instruments of Human beings) – Drop guest off at hotels or designated location.

Quotation:

- Group 4 to 10: 100 USD/pax

- Group 11 to 20: 80 USD/pax

Inclusions: Food, Water, Café, Insurance.

Exclusions: Personal expenses.

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TRIP 5:

Schedule: Depart at Gia Nghia City, from 7:30am to 5:00pm



Luu Ly Waterfall



West lake

Pick up guests at hotels – Enjoy coffee at Mini Coffee Museum – Visit Luu Ly Waterfall – Truc Lam Do Nguyen Zen Monastery – Have lunch – Stop at Nam Gle Volcano – View of West Lake – Dak Mil Prison – Victory Hill 722 Dak Sak – Lava sandstone meeting – Basaltic eruption phases – Mango Farm – Drop guest off at hotels or designated location.

Quotation:

- **Group 4 to 10: 100 USD/pax**
- **Group 11 to 20: 80 USD/pax**

Inclusions: Food, Water, Café, Insurance. Exclusions: Personal expenses.

TRIP 6:



Rice field under volcano



Bang Mo volcano

Dray Sap Waterfall

Schedule: Depart at Gia Nghia City, from 4:30am to 8:30pm

Pick up guests at hotels – Depart for Bang Mo Volcano – Trinh Nu Waterfall – Visit Lucky House, a humanitarian NGO project to nurture and educate disable children and orphans – Visit Krong No Information Center of Dak Nong UNESCO Global Geopark – Having lunch at Dray Sap Restaurant – Gia Long - Dray Sap Waterfalls – Enjoy Gongs performing – Back to Gia Nghia City and drop guest off at hotels or designated location.

Quotation:

- Group 4 to 10: 100 USD/pax
- Group 11 to 20: 80 USD/pax

Inclusions: Food, Water, Café, Insurance. Exclusions: Personal expenses.

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TRIP 7:



Nhan Co Aluminium Factory



Five-storey Waterfall

Schedule: Depart at Gia Nghia City, from 7:30am to 5:00pm

Pick up guests at hotels – Enjoy coffee at Mini Coffee Museum – Visit Nhan Co Aluminium Factory - Tran Hong Quan Power Plant – Visit Pi Nao Cultural Village – Having lunch – Visit Five-storey Waterfall – Back to Gia Nghia City and drop guest off at hotels or designated location.

Quotation:

- Group 4 to 10: 100 USD/pax
- Group 11 to 20: 80 USD/pax

Inclusions: Food, Water, Café, Insurance. Exclusions: Personal expenses.

MORE MEMORIES OF JIM SIMONS

I was sad to learn, belatedly, of the passing of Jim in March 2018. In retrospect I guess I shouldn't have been surprised as he must have been quite ancient. My guide and mentor Fred Davies, who passed away last year (June 2020, aged 87) remembered Jim from his Devon Speleological Society days in the 1950s and 1960s as they had caved together. When we descended on Jim in 1975, we took him Fred's greetings.

James W Simons was caving in Devon and writing about his findings in UK caving publications in 1962/63. He must have emigrated around the latter date as the Cave Exploration Group of East Africa (CEGEA), based in Nairobi, Kenya, was founded in 1964 by Dr P E Glover and himself, following the discovery of the Mount Suswa caves which they jointly investigated. The CEGEA membership over subsequent decades was largely UK expats and European cavers. Jim became Hon Chairman. He ran Kenya Guano Ltd mining bat guano from caves for fertilizer – how appropriate for a committed caver! He also developed Kenya's first tourist cave Mathione Lava Tunnel in the Chyulu Hills in early 1975.

There were also occasional forays into adjoining countries including Tanzania, Uganda and Zaire (Congo) to look at volcanic features and caves. However, the highlight must have been the discovery of Leviathan Cave in the Chyulu Hills in September 1975, initially 11 125 m long, later extended to 12 500 m long and "possibly of world record length". Over the decades Jim had kept the CEGEA Bulletin and Newsletter full of articles and he must justifiably have been proud of what he had created. More recently he organised the 8th Volcanospeleological Symposium in Nairobi 7-8 February 1998.



In June/July 1975 three members of Shepton Mallet Caving Club (UK) spent four weeks in East Africa. At this distance in time I do not recall how I came to contact Jim, possibly from an article he had written in "Studies in Speleology" but we had made contact prior to our visit and he had offered to put us up and I even rendezvoused with a CEGEA member, Bill Tanner, one evening in a pub in Gloucestershire. On arrival in Nairobi we made contact with Françoise, Jim's wife, who worked at the Belgian Embassy. We then went off to sort out car hire for our four-week visit. Then off to Jim's bungalow on the outskirts of the city. His place was like a fortress, all bars and locks, guard dog, nightwatchman to look after the building and vehicles. Even a mongoose in the kitchen to catch any snakes that got in through the open door. Jim advised us as we padded around in socks not to move quickly!

On the third day we set off on our tour/safari heading north to Mt. Kenya (washed off the 'Vertical Bog' by torrential rain [rainy season?]) so on to Mt Suswa where we visited some of the many lava tubes but did not enter the one with the leopard paw prints going in but not coming out!



Jim seeing us off on our tour

We were due to join up with a CEGEA weekend meet but couldn't find their camp, thus missing Jim and all he could have shown us. Then via Masai Mara Game Reserve, crossing into Tanzania, slowly through Serengeti National Park, down into Ngorogoro Crater, past Olduvai Gorge, Lake Manyara National Park and back into Kenya, through Tsavo West National Park and eastwards to Mombasa and the Indian Ocean, where we went as far South as Shimoni and North as far as Kilifi. Then back inland through Tsavo East National Park, back into Tanzania to Marangu at the foot of Kilimanjaro but just outside the National Park.

The next five days were spent walking to the summit at 19 340 ft, pausing at Hans Meyer Cave en route. We were the only party to make it that day. Then back to Nairobi and Jim's place.

Having eaten rather frugally on our ascent of Mt. Kili we had decided and also to repay his hospitality to take Jim out for a good meal. (Françoise was away in Belgium). However, Jim had a prior engagement – he had been invited to a farewell do at the Mountain Club. Jim phoned the organiser and explained his predicament and was told to bring us all along as well! We carefully kept ourselves in reserve until everyone appeared to have finished eating and then moved in. One of our party had 8 puddings! We must also have been dehydrated as we kept drinking. We had been warned about drinking at altitude. Nairobi is at over 6000 ft. but there was no effect. In the end the barman gave us the keys and told us to lock up and put out the empties. On the way back to Jim's place in the early hours we encountered a road block – 2 half trees with spikes sticking out of them staggered on both lanes of the road so we had to zig-zag through them. There was an armed policeman barely detectable in a black great coat. Jim, fortunately in the front passenger seat, wound down his window, said something in Swahili and we were through. If we had not had Jim with us how would we have fared?

Thus ended our four weeks of many adventures.

Martin Mills

February 2021

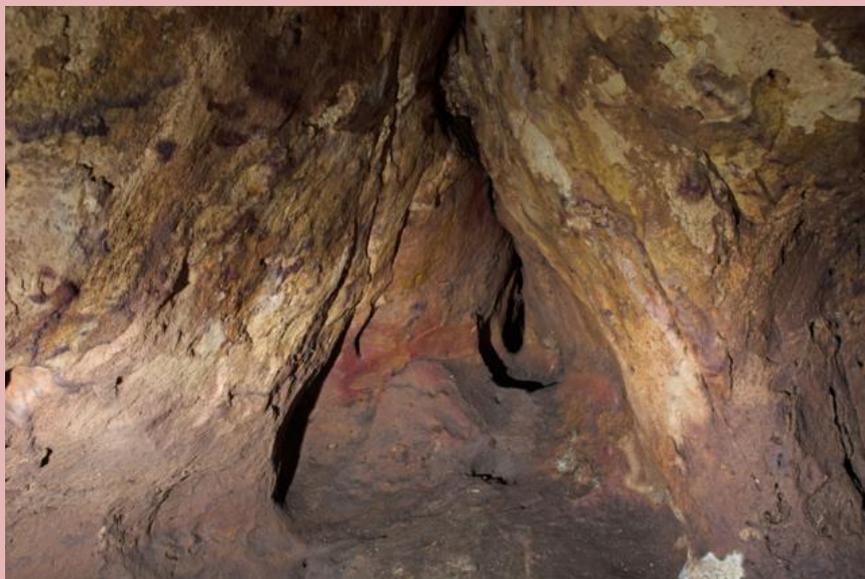
A Volcanic Cave in Thailand?

By Ed Waters after reports from Phil Collett

Just after the publication of Newsletter No.77, Phil Collett contacted me about a cave he had visited in Thailand, Tham Khao Musi , that he believes may be of volcanic origin. As with many caves in Thailand the site lies within the boundary of a Wat (temple) but does not appear to be formed within limestone. Phil is obviously very experienced in exploring lava caves, but is uncertain as to the origin of this cave and would very much appreciate any opinion from readers of this publication as to whether this cave may be of volcanic origin.

The following photos, taken by Phil, are included here which will hopefully spark some debate.





Is this a lava tube? Tham Khao Musi, Thailand. (Photos, Phil Collett)