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Union Internationale de Spéléologie (UIS)  
Commission on Volcanic Caves

*e*-NEWSLETTER

No.73 – September 2018

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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 caves.

## UIS Commission on Volcanic Caves Newsletter No.73



### UIS COMMISSION ON VOLCANIC CAVES

Honorary Chairman  
William R. Halliday, M.D.  
wrhbna@bellsouth.net

Chairman  
John Brush  
Warwillah@gmail.com

Vice Chairman  
Greg Middleton  
ozspeleo @iinet.net.au

Web Master  
Dirk Stoffels  
dirkjs123@bigpond.com

Editor  
Ed Waters  
hayleyclark743@btinternet.com

#### 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

Ice Cave at Medicine Lake,  
California

by Harry Marinakis

## **Editorial**

Welcome to issue No.73 of the UIS Commission on Volcanic Caves Newsletter. The main news reported here concerns the recent 18<sup>th</sup> international symposium on volcanic caves held at Lava Beds National Monument in California. Although other commitments prevented me from attending, it is clear that the event was a major success. Ann Bosted, John Brush, Kirsty Mills and Harry Marinakis have provided reports on various aspects of the symposium and associated field trips. I hope you will agree with me that these reports give a really good insight to the event for those of us who could not attend, and allow those who did to relive many happy memories.

In addition to the symposium reports, Martin Mills has provided a bibliography of articles on vulcanospeleology published between 2008 and July 2018. I am sure that this will be a valuable tool for those of us engaged in research on volcanic caves.

As mentioned in previous newsletters there is also a group dedicated to volcanic caves on Facebook. Although activity is steady rather than hectic some very interesting news and information is reported there. Of special note since the last newsletter in June has been Laurens Smets exploration and surveying work in various caves in Lanzarote and Ramón Espinasa's exciting finds near Veracruz in Mexico.

Finally I would like to thank all of the contributors to this edition, including photographers (with apologies that I just could not find space to use them all of the many submitted), and make the usual appeal for material for the next one, and to start looking forward to the next symposium in 2020.

All the very best,

Ed Waters, 23<sup>rd</sup> September 2018

# Message from the Chairman

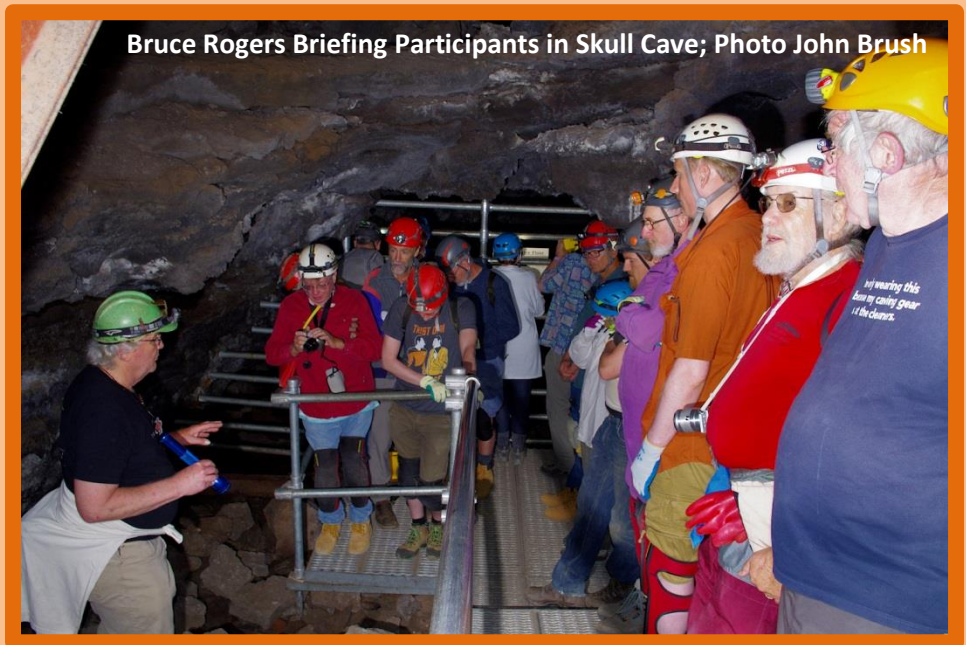
The major event in the Vulcanospeleology calendar is the International Symposium on Vulcanospeleology (ISV). The first symposium was held in 1972 and since 1998, a symposium has taken place once every two years, or thereabouts. There have now been 18 symposia (or symposia, if you prefer).

The most recent ISV, as many of you would be aware, happened in and around the Lava Beds National Monument (LBNM) in California in July 2018. More than 50 participants from 8 countries (USA, Australia, United Kingdom, Iceland, Italy, Japan, Puerto Rico and Switzerland) made it to that remote area of northern California and endured a week of hot and hazy weather. However, apart from the minor inconveniences resulting from high temperatures and the smoke from bushfires across California and Oregon, I thought it was a wonderful week. The program was well organised, the presentations were interesting, the excursion options were numerous and the social activities were laid back and thoroughly enjoyable.



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That the symposium worked so well was due in no small measure to the hard work and organisational skills of Mary Rose, the Symposium Convenor. Mary did much of the work herself, but she was ably assisted by members of the Redwood Grotto, who led trips and undertook many preparatory and behind-the-scenes tasks, and by several individuals who should be individually recognised. Peter Bosted stepped in at a late stage to organise the program of presentations and to publish the abstracts handbook. Peter is now collecting papers so that the Proceedings can be published on the Commission's Website. Ed Strausser made sure PowerPoint presentations were loaded and all the audio-visual equipment continued to function. Each afternoon Bruce Rogers led informative and entertaining trips to caves and other volcanic features. In addition, I would like to acknowledge support from LBNM staff who gave participants special access to the area, permitted access to restricted caves, guided several trips and were generous in imparting their knowledge to participants.





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I was very impressed with several aspects of the caves I saw at LBNM. The density of passage development in the Cave Loop area near the Visitor Centre was astounding and in my experience, is perhaps only second to that of the Kipuka Kanohina system in Hawaii. The spectacular variety of lava features in the caves was also impressive. All the more so as many of the caves have had open public access for many years. Sure, it was easy to see signs of human impact: worn trails, minor breakages, a small amount of graffiti and a little (probably unintentional) littering, but considering how many ordinary members of the public must have visited the caves over the years, these impacts did not significantly detract from my experience. I also thought there was value in the LBNM flexible access system that temporarily closes off caves at sensitive times, such as when bats are roosting.



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An essential element of the symposium program was a meeting of the Commission on Volcanic Caves. The meeting, on 25 July, which was attended by most participants, made several important decisions, all of which were unanimously supported:

1. That the four office holders continue in their current positions, namely:

Chairman: John Brush

Vice Chairman: Gregory Middleton

Newsletter Editor: Ed Waters

Web Master: Dirk Stoffels

2. 19th International Symposium of Vulcanospeleology

That the offer by the Gruppo Grotte Catania to host the 19th International Symposium of Vulcanospeleology at Catania, Sicily (Italy) at a date to be fixed in 2020 be accepted.

3. The internationally-important values of lava caves in Iceland

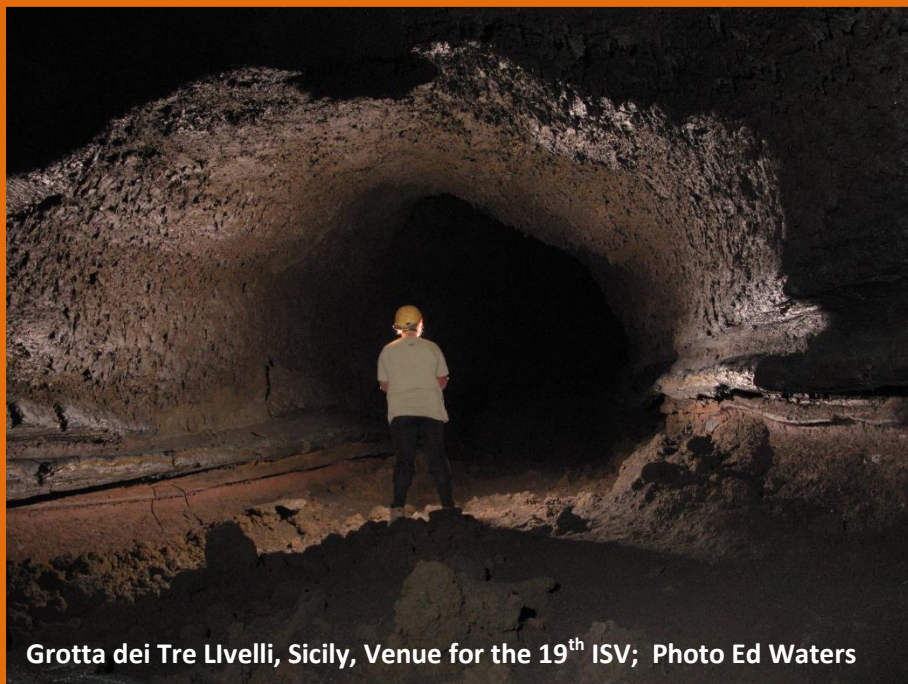
That the Commission urge government agencies in Iceland to recognise the national and natural heritage values of lava caves and their features and to ensure that they are protected from degradation and permanent damage resulting from surface developments and unconstrained and unsympathetic public access or commercial activities.

4. Vote of thanks to Convenor of 18th ISV

That the Commission recognise the work of Mary Rose and her team and thank them for organising an excellent symposium program that had a good balance of informative presentations, interesting field excursions and relaxed and enjoyable social activities.

**NB:** The Catania ISV will now take place in September 2020, not July as initially thought.





Finally, a note about future symposiums. Although 2022 is still a long way off, the Commission has been wondering about where the 20th ISV, scheduled for 2022, could be held.

I encourage all members to seriously consider whether they could host, or help to organise, the ISV in 2022. To ensure the continued success of the ISVs, there needs to be at least one bid to host the 2022 symposium that could be considered at the next meeting of the Commission at Catania in 2020.

John Brush

Chairman

UIS Commission on Volcanic Caves

## **A pre-symposium raft trip on the Rogue River**

Rafting a river in Southern Oregon has long been on my bucket list, so when Mary Rose was casting around for pre-symposium trip leaders, I volunteered to organize a raft trip.

My “organization” came down to finding a trip that would end on Friday so we could all attend the symposium Howdy Party on Saturday. Thankfully Indigo Creek had such a trip scheduled and, after a bunch of emails, we soon had all the spots in the rafts booked by cavers and friends. “We” included Linda Starr and Bob Cornish from New Mexico; Cathie Plowman, David Butler and Greg Middleton from Tasmania, Down Under; David Foran from somewhere flat; Janet and Tim Hughes from California; Peter and myself from an island surrounded by water.

From the left are Peter Bosted, Corby Fuhriman (guide), Bob Cornish, Linda Starr, Janet Hughes, Greg Middleton, Annie Bosted, David Foran, David Butler, Cathie Plowman, Tim Hughes and Sebastian Munoz (guide)



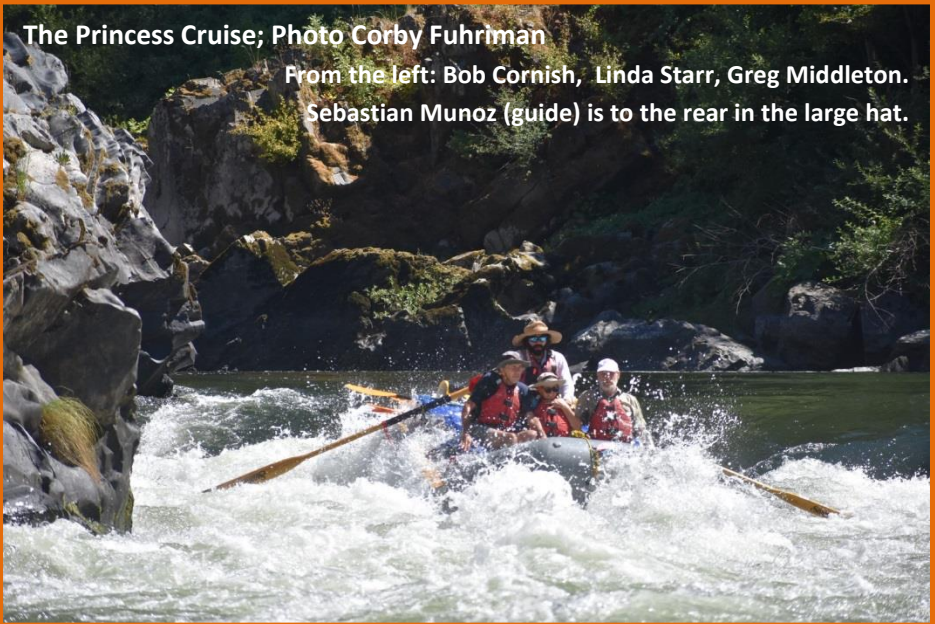
**The Raft Trip Group; Photo Corby Fuhriman (Time Delay photo)**

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At the Galice Resort we hooked up with our three river guides - Corby, Glenn and Sebastian - all young, tanned, fit-looking guys. Glenn was the camp and hospitality executive - he would paddle our gear to the camp site and set up camp for us, then cheerfully shove a cold drink into our hands and steer us to the chairs and appetizers the second we landed in camp. Sebastian captained the "Princess Cruise" - no paddling was required of the three cavers in that raft. Corby had the lead boat and took seven cavers whom he rarely asked to paddle. Each guide had a pair of long oars, with which they steered the unwieldy crafts without discernible effort. They also kept up a steady patter of tall stories, old river jokes and weak puns, that elicited laughs and groans.

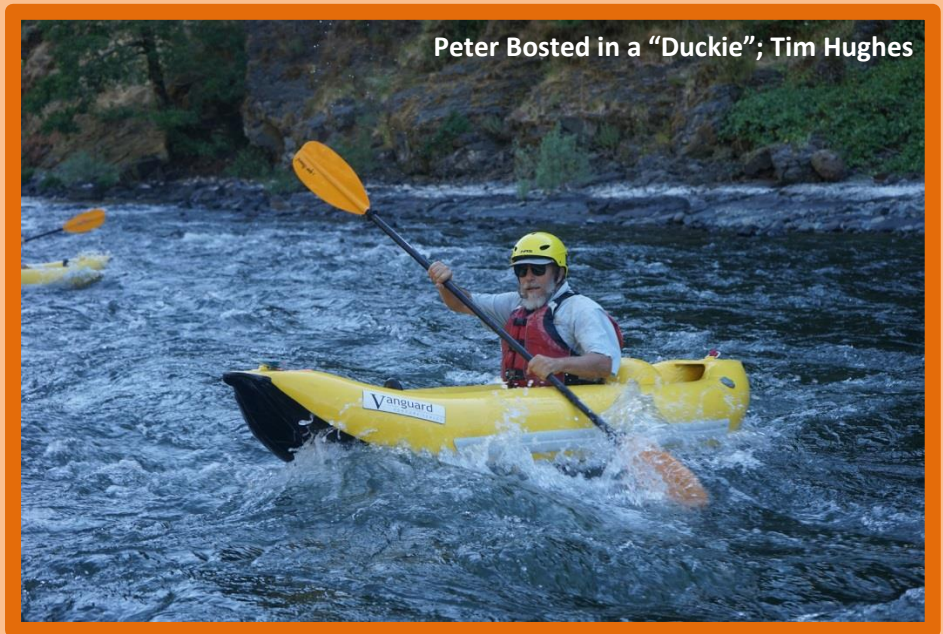
**The Princess Cruise; Photo Corby Fuhrman**

From the left: Bob Cornish, Linda Starr, Greg Middleton.  
Sebastian Munoz (guide) is to the rear in the large hat.





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Very quickly the succession of waves, rocks and pristine forest scenery had all our attention. Our routine was easy - up early for tea and coffee, eat a cooked breakfast, take down tents and pack bags, get in the rafts, swim or paddle or laze to the lunch spot, take a short hike while lunch is laid out, eat lunch, get in rafts, swim or paddle or laze to camp, occupy a camp chair in the shade and drink wine, eat excellent cooked dinners, sleep. All the while we kept up conversations about cavers, caves, caving, cave trips, cave news, cave rumors and almost everything else.

For those interested in the stats, we covered 11 miles (18km) of river the first day, 14 (23km) on the second, and 12 (19km) on the final day - totalling 37 (60km) miles of unspoiled river. We "did" about 25 of the easier class II rapids, eleven of the more difficult class III rapids and three of the most challenging class IV rapids.

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The first class IV rapid came less than two miles from the put in. Corby judged that he and Sebastian needed light rafts for this one, so we cavers walked around it and watched the rafts struggling in the narrow “Fish Ladder”. The other excitement was at the end of the second day when we rafted past some fierce looking rocks called “Jaws”, then did a Class III rapid (Mule Creek Narrows), followed by two Class IV rapids (Mule Creek Coffee Pot and Blossom Bar), then another Class III, (Devils Stairs).

Our guides packed a few inflatable kayaks or “duckies” for us to play with. They inflated them the first afternoon, the second morning and the third day - all times when no Class IV rapids were expected. Most of us took turns paddling them. It was fun to be low in the water, close to the splashes, and feel the currents sweep the little craft along.

Corby made sure we were entertained beyond duckies, bad jokes and good food. Each lunch stop was associated with a short hike to an interesting destination, such as a waterfall or a ranch. He also stopped at good jumping off rocks. I won't say he was a show off, but nobody else tried summersaulting into the water.



Jumping! Left to right Janet Hughes, Corby Fuhriman and Peter Bosted;

Photos Annie Bosted



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Aside from paddling, swimming, hiking, jumping, exploring, eating and drinking, we did a fair amount of wild life spotting. I held a cute little newt (or salamander) that someone found in a pool. Fearless deer wandered into our camp and we briefly glimpsed a river otter one morning. From the rafts we saw a lot of turtles, mergansers<sup>1</sup>, golden eagles, osprey, turkey vultures, cormorants, mallard ducks and other riparian birds.



The Newt; Photo Tim Hughes

All too soon Foster Creek and the take-out loomed. We ten cavers piled into the shuttle bus for the ride over the mountains and back to our starting point, while the guides followed with the rafts piled on a trailer.

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<sup>1</sup> A type of duck [Ed].

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Then Cathie announced:

“We need to sing a thank you song for the guides”.

Sounds simple, unless you have to write the song first. We did.

By “we” I mean Cathie - with the rest of us making contributions of dubious value like:

“I don’t like that word”

“So what else rhymes with Sebastian?”

“Can’t we change his name?”

“OK, what to?”

“Something that rhymes with Sebastian?”

“That’ll work.”

By the half way point on the road back, Cathie, in spite of our help, had seven verses composed (without changing Sebastian’s name) and she rehearsed us.

Our road side rendition of Cathie’s composition certainly had volume. Judging by their amazement, I’m inclined to bet we sang the best “Thank You” song Corby, Sebastian and Glenn had ever heard, but I could be wrong.

Annie Bosted

## **Pre-Symposium Excursion to Medicine Lake Volcano**

The Medicine Lake pre-symposium caving excursion was hosted by members of the Redwood Grotto of the National Speleological Society (NSS) of northern California.

The excursion was based in the small town of McCloud in northern California, USA. The town is located at the base of the volcano Mount Shasta (elevation 4,322 meters), and approximately 75 km from the Medicine Lake volcano.

The Medicine Lake volcano is a one-million year-old shield volcano that is located at the extreme northern tip of California. The volcano rises to an elevation of 2,414 meters, and is very large - roughly 50 km in diameter. The last eruption was 900 years ago. The flanks of the Medicine Lake volcano are covered with hundreds of pyroclasts and caves, most of which have not been explored. Just to the north of the volcano is Lava Beds National Monument.



Medicine Lake Crew from left to right Ron DeLano, Mark Linn (Leader), Scott Belland, Preston Addison, Tomislav Gracanin, Finn Addison; Photo Harry Marinakis. Inset location map.

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The goal of the pre-symposium excursion was to explore a small area on the flank of the Medicine Lake volcano, so many of the caves were new to all of the participants, even the trip leaders.

On the first day of the excursion, the group went for a very long and arduous hike down a collapse system to search for caves. On the second day, the group explored a lava flow next to the road, where we found and explored a few ice caves. On the third and last day, the group rappelled into a large cave that was known for its unique features.



The pre-symposium excursion to the Medicine Lake volcano was exciting, rewarding, and very well organized. The people who attended this event were fabulous, and I felt very lucky to have been able to participate. I commend the members of the Redwood Grotto who hosted this caving trip. Well done!

Harry Marinakis

# **The 18th International Symposium on Vulcanospeleology**

**Lava Beds, California, 21-26 July 2018**

The 18th International Symposium on Vulcanospeleology (ISV) was focussed on Winema Lodge, a rustic privately-owned facility in northern California, where most participants stayed, where meals were served and where all the presentations and a meeting of the Commission on Volcanic Caves took place. The program structure for the symposium was based on morning presentations followed by a buffet lunch and then a range of excursion options each afternoon to caves, other volcanic features or to historic sites. In the evenings there were informal after-dinner presentations on a variety of cave-related topics.



**Winema Lodge; Photo John Brush**



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The presentations (more than 20 of them) covered a broad range of interests, including the history, geology and exploration of the local caves, microbiology, cave formation processes, management and protection issues, exploration and documentation (with a focus on Hawaii and Vietnam), early human occupation and use of caves and an overview of the UIS. There were also two presentations concerning extra-terrestrial lava cave studies. Presentations about lava tubes on the Moon and on Mars have featured at previous ISVs, but as this appears to be a growing area of interest, I am wondering if in future, the “I” in ISV should refer to Interplanetary, rather than International.

Proceedings of the Symposium will soon be published on the Commission’s Website: [www.vulcanospeleology.org](http://www.vulcanospeleology.org)



Gold Bacterial Slime, Golden Dome Cave; Photo John Brush



Lava Benches, Valentine Cave; Photo John Brush

Most of the afternoon cave and historical excursions were in the Lava Beds National Monument (LBNM). The LBNM entrance is only 13km from Winema but many of the sites visited were a considerable distance further into the interior of the Monument. Around 800 caves have been recorded at LBNM and about 20 of them are publicly accessible. Those caves have formed trails leading to their entrances and where necessary, have metal steps and walkways to facilitate safe access for the general public. Some of the public access caves are very impressive and many were visited on the symposium excursions, either on one of the informative trips led by Bruce Rogers, or on a self-guided basis. Participants were also able to visit several restricted access caves that have important biological, cultural or geological values, or contain permanent ice.

In conclusion, the Lava Beds ISV was fantastic, with a good bunch of participants, interesting and thoughtful presentations and a diverse programme of excursions.

John Brush

## **CRATER LAKE FIELD TRIP**

When Crater Lake was announced as a possible pre-symposium field trip we signed up along with seven other people. We collected our packed lunches and left Winema Lodge at 9.00 am in a hired minibus with driver Don Raan and guide Todd Kepple, Manager of Klamath County Museum and an Oregon Master Naturalist and Interpretive guide. Todd gave us the choice of basing the trip on three possible areas of interest – Historical/Cultural, Hydrological or Geological but as there was no clear favourite he proceeded to cover all three throughout the day. He began by explaining that much of the local area had been drained to provide rich farmland but this now had to be irrigated to maintain good crops. However recently after many years there had been a Supreme Court decision granting water rights to the Native Americans so some areas could no longer be irrigated. He also explained the course of the Lost River and all the other water courses we crossed on our way north.

Crater Lake Group; Photo Roberto Conti





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We went on a detour through Klamath Falls to give us a view out over the area and then we headed north along the east side of Upper Klamath Lake all the time discussing the geology of the area and the local industry which was collecting the algae from the lake for commercial use.

On this section we had various stops to look at the geological formations including the fault line where the land had been uplifted which had been cut through when the railroad and the road were built. We also stopped at a rest area to visit the rest rooms and have our lunch. Our driver was very good at swinging off the road to stop in some very unlikely places so that we could properly view the sites that were being discussed.



Geological Formations Exposed by the Railway Cutting;  
Photo Roberto Conti

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We finally arrived at Crater Lake around 12 noon, concerned that there would be a long queue to enter the park but the fears were unfounded and we entered the park on Don's annual National Park pass. We stopped briefly at the visitor centre at the just beyond the park entrance but we had to move on to meet up the Park Ranger David Grimes who was to guide the party on the trail to Watchman Overlook. Todd expressed his amazement that the organisers had been able to book David for the tour as he was "the best there is".

Crater Lake; Photo Roberto Conti



My broken ankle kept me in the minibus but the others, including our driver and our guide, set off up the trail 0.8 miles to the lookout tower. There were many stops along the way to discuss the people involved in the park, the annual snowfall, the world's most dangerous volcanoes and many other topics. The walk which should have lasted an hour took more like two and a half hours such was the interest in the discussions. The view from the top was amazing.



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After this we had time for a brief visit to the visitor centre at Rim Village for drinks and purchases before heading back to Winema Lodge by a slightly different route part of the way, this time travelling past the partially reconstructed US Army camp where four of the Native American leaders in the Modoc Wars had been executed and buried, through Modoc Point where our guide Todd discussed the historical/cultural implications of the ongoing adjudication to the Klamath Tribes' treaty rights and the water issues. Throughout the entire day we were kept extremely well informed by both Todd Kepple and by David Grimes, the Park Ranger, and we arrived back at the Lodge in good time for the Welcome Party that evening.

Crater Lake; Photo Greg Middleton



Participants: Julia James, David Foran, Greg Middleton, Martin and Kirsty Mills, Lilly Petrovic, Dirk Stoffels, Roberto Conti and Olga Lucherini.

Photographs courtesy of Roberto Conti, Julia James and Greg Middleton.

Kirsty Mills  
August 2018

## **RECENT VOLCANOSPELEOLOGICAL PUBLICATIONS**

- STEFÁNSSON, Árni B.** 2008. Um Verndun og Varðveislu Íslenskra Hraunhella. Náttúrufræðingurinn Volume 76, Nos 3 – 4, pp. 121 – 131. 12 colour photos. [Icelandic text]. 45 references. Cave destruction and preservation.
- STEFÁNSSON, Árni B.** 2009. Aðgengi Þríhnúkagígs. November 2009. Vsó Ráðgjöf. 107pp. A4 landscape format ring-bound. Icelandic text. 2 page English summary. Proposed development/options to facilitate public access. CD inside rear cover. Numerous photos, maps, diagrams, tables.
- DETAY, Michel.** 2011. Volcanospéleologia en Islande perspectives scientifiques et émergence du geotourisme. Lave No. 148, pp. 19 – 30 + 2 pages of photos. (Janvier). 3 surveys. table. 11 photos. [French text].
- DETAY, M. and HRÓARSSON, B.** 2011. Tunnel di lava. Le Scienze (511), pp. 70 – 77. (Gennaio). photos. [Italian text]. also as Les Tunnels de lava. Pour la Science (399). pp. 2 – 7. (Janvier). photos [French text].
- MILLS, Martin.** 2012 (Spring) [published July 2013]. Iceland, Basalt, Lava Caves, etc. A Bibliography. Shepton Mallet Caving Club Journal Series 13, No. 1, pp 27 – 45. 314 items (including 47 items either written or co-authored (with others) by the late Chris Wood) and abstracted into an accompanying location and subject index.
- ANON.** 2012. Step inside a Volcano [Daily] Telegraph Travel. 5 May 2012. T4 [Thrinukagigur].
- BLEACH, Stephen.** Tourists in Iceland can now descend 400 ft. into a volcano's magma chamber. The Sunday Times travel 24 June 2012, p. 4. Thrinukagigur visit. Map, diagram and 1 photo.
- CROSSAN, Rob.** Iceland's latest hotspot rocks. Daily Express 14 July 2012, p. 50. Thrinukagigur visit. 1 photo.

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- LAFFERTY, Jamie. Voyage into the Volcano. The Sydney Morning Herald. 21 – 22 July 2012. Traveler p. 15. [Thrinukagigur] 1 photo.
- KALDAL, Jón. 2012 (October – December). Heart of Darkness. Atlantica Iceland Review pp. 54 – 57. Account of a descent into the Þríhnúkagígur magma chamber. 4 colour photos. [English text].
- MIDDLETON, Greg. 1 December 2013. Impressions of Some Icelandic Caves. privately. 10pp, 10 photos, 2 surveys. [unnamed recently-discovered cave; Þríhnúkagígur; Leiðarendi; Surtshellir; Stefánshellir; Vatnshellir and Gjögri (Cave)].
- NSS News Feb. 2014, p. 26. Colour photo by Bosteds of exceptionally large lavacicles in Hawaiian lava cave.
- NSS News March 2014, p. 28. Colour photo of Valentine's Cave in Lava Beds NM.
- V[ARGARÐSSON], E[lgina] M[arie]. Journey to the Centre of the Earth. Icelandic Times (22), p. 47 (2014). Vatnshellir. 4 photos.
- NSS News May 2014, p. 27. Book Review of Caves of Fire: Inside America's Lava Tubes. Second edition (2013).
- NSS News August 2014, p. 21. 3 colour photos of Oregon lava caves.
- ibid. p. 24. Abstract of Hawaii Speleological Survey Newsletter. Spring 2014, Vol. 35.
- NSS News September 2014, p. 2. Colour photo of Livia Gallardo (owner) in Cueva Bellavista/Cueva del Gallardo, Galapagos.
- PLOWMAN, Cathie with ADDISON, Aaron. 2014. Galapagos Islands Caving, March 2014. NSS News September 2014. pp. [20] – [45]. including 30 colour photos.
- ANON. 2014. Journey to the Centre of the Earth. Icelandic Times No. 22, p. 47. Vatnshellir cave tours. 4 colour photos. [English text].
- JAGOU, Stéphanie. 2014 (Décembre). Profondeurs islandaise: Spéléologie en ascenseur. Spéléo Magazine No. 88, pp. 30 – 31. Account of a descent into the Þríhnúkagígur magma chamber, Iceland. 3 colour photos, 1 diagram. Also mentions Arnahellir and Vatnshellir. [French text].

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- ULLOA, Andréas, HAYDOCK, Adam and TRESCOTT, Scott. 2015.  
Explorations in the Caves of Irazu Volcano and Their Amazing Minerals [Costa Rica]. NSS News February 2015. pp. 4 – 11.  
Including 22 colour photos and 2 maps.
- NSS News February 2015, p. 28. Abstract of Hawaii Speleological Survey Newsletter. Fall 2014, No. 36.
- SÆMUNSSON, Kristján and SIGMUNDSSON, Freysteinn. 2015 (April).  
Geology of the Þríhnúkar area. Introduction by Árni Stefánsson.  
A5 guidebook, 8 pp. 6 colour illustrations. [English text]. This is given to each visitor to the Þríhnúkagígur magma chamber and explains the geological context. Those at the 2016 symposium in Hawaii had the opportunity to pick up a free copy.
- STONE, Fred. 2015. Pahoa Cave Lava Flow [Hawaii]. NSS News April 2015, p. 22. Including 2 colour photos.
- NSS News May 2015. p. 18. 3 colour photos of lava tube/formations.
- NSS News August 2015, p. 18. Abstract of Hawaii Speleological Survey Newsletter, Spring 2015, No. 37.
- NSS News December 2015, p. 31. Abstract of Hawaii Speleological Survey Newsletter, Fall 2015, No. 38.
- BRUSH, John. 2015 (December). Australian Cave and Karst Management Association Journal NO. 101, pp. 5 – 12. Show Caves in Iceland. Accounts of descent into Þríhnúkagígur Volcano and Vatnshellir show cave. 20 colour photos.
- SKEELS, Matt. Inaccessible Lava Tube System [Oregon]. NSS News February 2016, pp. 9 – 13.
- BUNNELL, Dave. 2016. A Visit “Inside the Volcano” – Iceland’s unique show cave Þríhnúkagígur. NSS News March 2016, pp. 8 – 11.
- NSS News March 2016, pp. 24 – 26. Spelean Spotlight: Diana Northup [Interview] by Michael Ray Taylor.
- LILLINGTON, Andy. 2014 (Spring). [published April 2016]. Lava Tube Detection using Wi-Go, Iceland. Shepton Millaet Caving Club Journal, Series 13, No. 5, pp. 233 – 239. 2 photos, 4 figs, 3 refs.

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- STEFÁNSSON, Árni B. and STEFÁNSDOTTIR, Gunnhildur. Surtshellir í Hallmundarhrauní Náttúrufræðingurinn 86, pp. 112 – 126. (2016). Icelandic text, English summary, 11 colour photos, 2 surveys, 2 engravings, 37 references. pp125 – 126 summary in Icelandic of trips to Azores (1998); South Korea (2008); Australia (2010); Galapagos (2016).
- STEFÁNSSON, Árni B. and STEFÁNSDOTTIR, Gunnhildur. Surtshellir in Hallmundarhraun. NSS News Vol. 74, No. 5, pp. 12 – 19 (May 2016). English version of the above with some revisions, including extra sections starting p. 4 Childhood Memories and p. 6 Solid Evidence . “Umraeða” omitted approx. 4 pages, 4 engravings, photos smaller format, 2 different photos, 11 extra photos, including on rear cover. 29 references.
- CHAVDARIAN, Chuck and CHAVDARIAN, Greg. Searching for Lava Caves – a Rapid Method. NSS News Vol. 74, No. 5, pp. 3 – 5 (May 2016).
- WATERS, Ed. 2016 (September). A Pilgrimage to the Home of Vulcanospeleology. Mendip Caving Group News (380), [12] – [17]. 17 b & w photos.
- BRUSH, John. 2016 (October). International Symposium on Vulcanospeleology (ISV17). The Very Latest [Canberra Speleological Society] vol. 21, No. 2. Front and rear covers, pp. 33 – 47. 29 photos.
- EINARSSON, Guðni. Fjársjóðir faldir í hellunum. Morgunblaðið 1 December 2016, p. 22. Icelandic text. 3 photos. Árni B Stefánsson Þrínúkkagígur project including his wood-carving of the cut-away model of the shaft and descending cavers.
- BRUSH, John. 2016 (December). Show Caves of Hawaii. Australian Caves and Karst Management Association Journal (105) cover, pp. 10 – 16. 17 photos
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- NSS News August 2017. Vol. 75, No. 8, p. 2. Colour photo of trees and roots in an entrance to Kazumura Cave by Dave Bunnell.
- ibid. p. 18. Salon Gallery. 2 colour photos by Dave Bunnell in new lava tube discoveries in 2016 high on Mauna Loa, Hawaii.
- ibid. p. 19. Underground Online by Bill Grose. Brief review of Hawaii Grotto’s Facebook page small cave near Ranches in Ka’o roughly a mile long. Name not revealed yet.
- ibid. p. 30. ‘Underground Update’ Sag Rag (Shasta Area Grotto) Jan – Feb 2017 clean up Pluto’s Cave lava beds of Shasta, California; Hawaii’s Speleological Survey of the NSS Spring 2017, No. 41. High up on the slopes of Mauna Loa Kempe’s Cave within 300 feet of connecting to Freeze and Breeze Cave; BBC Horizons episode in preparation: Hawaii lava tubes thought to be similar to Mars lava tubes; picture and description of 27 foot Pit Cave, Lua Lantana and Angel Wings Cave; RMC Rocky Mountain Caving March 2017, Vol. 34, No. 1, Bar-E Cave’s volcanic Cave in Routt County, Colorado.
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- ibid. p. 28. Review of the “Cave Fauna of California” by William R Elliott et al. Proceedings of the California Academy of Sciences, July 28 2017, 311 pp. data includes 181 lava tubes.

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NSS News February 2018. Vol. 76, No. 2, p.15. Sag Rag. (Shasta Area Grotto) September/October 2017. Lava Caves of California's Siskiyou County mapping Formule 44 Cave, 44 feet long, and exploring Sushi Cave (1437 feet long).

NSS News April 2018. Vol. 76, No. 4, pp. 25 – 26. Colorado Volcanic Cave cleanup by Donald G Davis. Not a lava tube, funnel-like pit in the flank of a brecciated basalt dike. Length 158 feet, depth 65.6 feet. 9 colour photos, survey.

JONES, Chris. 2018. Atlantic Underground. Descent 262, (June/July 2018), p.15. Account of São Vicente Caves and Volcanism Centre on Madeira. Open to the public in 1996. Over 1000 metres of cave accessible to the public. 2 colour photos.

**Martin Mills July 2018**

**Editor's Note:** Martin's bibliography of recent vulcanospeleological publications represents an immense amount of effort and research that will be invaluable to all of us researching volcanic caves. Unfortunately it is the nature of the beast with this sort of work, that despite the most diligent of efforts that some documents will be missed. In this case during the proof reading of this issue of the Newsletter Annie Bosted has noted that two significant publications have not been included, namely the newsletter of the Hawaiian Speleological Society Newsletter and the "SagRag" (Newsletter of the Shasta Area Grotto of National Speleological Society). Whilst Martin has picked up abstracts of these newsletters published in the NSS News the original articles have not been.

I am sure that there will be other omissions from Martin's bibliography, but in the absence of an "official" commission librarian we rely on dedicated members to carry out this sort of research for the benefit of all. So although this bibliography may not be perfect, I for one would like to thank Martin for all the hard work in putting this together, and perhaps we all need to think about how the commission could potentially better compile records of relevant publications in future?

## Images From the 18th ISV



Images from the 18<sup>th</sup> ISV. Top down, Lava Cascade with Rafted Block, Hopkins Chocolate Cave (John Brush), Ice Cave Medicine Lake (Harry Marinakis), Ice Blockage in Skull Cave (John Brush). Background Wall Dribbles and Brown Bacterial Slime, Hopkins Chocolate Cave (John Brush)

## **Ancient skeletons discovered in Krong No volcanic caves, Vietnam**

On 18 September, the National Museum of Nature in Vietnam announced new details on a discovery of prehistoric human remains in the volcanic caves at Krong No in the central highlands of Dak Nong province.

It had been reported earlier in the month that the remains of a young boy had been discovered in one of the caves in the Dak Nong area.

The remains of 10 Neolithic humans have now been found, along with thousands of artefacts in the most bountiful archaeological site in the region

Museum director Nguyen Trung Minh's recent announcement said the excavation had uncovered two additional skeletons, all of which date back nearly 7,000 years. Pieces of ceramics, stone and animal bones were also found in the cave.

This finding is the first of its kind in the area, Minh said, adding "it is a shocking discovery – the Krong No volcanic cave system is one of the largest of its kind, and the only one in Southeast Asia where we have found traces of prehistoric people."

Vietnam is currently seeking UNESCO recognition for the Krong No area as a global geopark and the recent discoveries are reported to bolster the case for recognition as a UNESCO site.

Professor Nguyen Lan Cuong, General Secretary of the Vietnam Archaeology Association, said the three skeletons included two adults and a child of about four years old.

The skeletal remains were found around one metre below the surface of the cave, surrounded by trace remains of ten total corpses.

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Scientists have also found traces of fires and rubbish, suggesting each cave had a designated purpose. Some could have served as long-term residences while others were merely temporary hunting camps.

The discovery results from a research project, chaired by La The Phuc of the National Museum of Nature, designed to establish a museum at Krong No on the cave heritage of the central highlands.

The museum will coordinate with experts in the coming months to continue research into the prehistoric people of the area.



The above information was compiled from various on-line reports published on 19 September 2018, including VN Express, Vietnam Plus and Vietnam News.