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Union International de Spéléology (UIS)
Commission on Volcanic Caves

e-NEWSLETTER

No. 66 - July 2013

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



<http://www.vulcanospeleology.org>

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

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U.I.S. COMMISSION ON VOLCANIC CAVES



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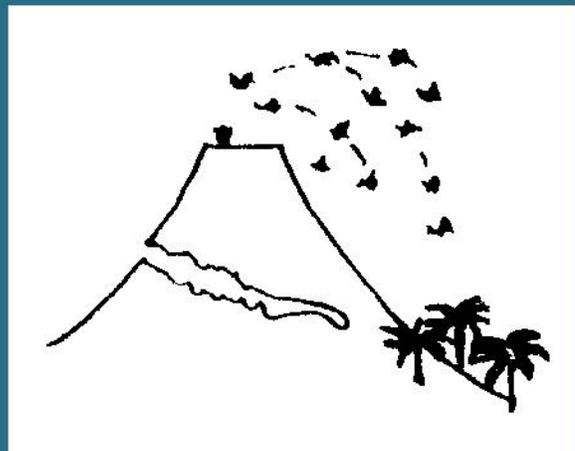
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MISSION STATEMENT

The U.I.S. 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

An active eruption during the 1969–1971 Mauna Ulu eruption of Kilauea Volcano, Hawai'i Volcanoes National Park, Hawai'i. Photo by J.B. Judd, October 21, 1970. Photo is courtesy of the U.S Geological Survey (U.S.G.S).

THE CHAIRMAN'S CORNER



JAN PAUL VAN DER PAS

Prepared for the UIS Congress in Brno/Czech Republic) 2013

Please realize our commission has (often) two symposia between UIS congresses. At each occasion a commission meeting is hold, and a report issued. So this one reports about the period between 2009 (Kerrville/USA) and 2013 (Brno/Czech Republic).

Main activities were the symposia in Australia 2010 and Jordan 2012. Coming is now Galápagos (Ecuador) 2014. Proposals for future symposia are Hawaii 2016, and New Mexico and Argentina for 2018.

A clear problem starts to be the recession in certain parts of the world. Participants who work in institutes do not (at times) get financial support to visit symposia.

We lost two members of the commission – Ron Greeley, certainly known for his knowledge of caves 'not on this world', and Chris Wood, who investigated caves 'of this world'. His long awaited book about caves of volcanic origin (actually the first one everybody was waiting for) is temporarily in heaven.

Some activities of members:

–our honorary president, Bill Halliday, is working with NASA to suggest lava tubes as shelter for astronauts.

–Árni Stefánsson, our man on Iceland, is working very hard to make the 'hollow' crater accessible as a tourist attraction.

–actually a non-member, Sjoerd van der Schuit of the Netherlands, looked for lava tubes on the Kilimanjaro and found some. Report available.

–our man in Kenia, Jim Simons, published a latest 'Speleophant' containing many never published articles.

–our vice-chairman, Harry Marinakis, now takes care of the digital Newsletter. He also made the 'rules' about organizing a symposium, maybe needed for future symposia.

–Stephan Kempe is doing much work in Jordan, and maybe saved the symposium in Jordan.

–John Pint takes care of the web-site, which is now actually a bible for volcanic caves: it contains the newsletters, but also all proceedings of the symposia.

Jan-Paul van der Pas



MESSAGE FROM THE VICE-CHAIRMAN



(Photo: Harry in a lava cave in Jordan, by John Brush)

Greetings!

This e-newsletter was delayed pending more information about the 16th International Symposium on Vulcanospeleology (16th ISV) in the Galápagos Islands, Ecuador. I am pleased to announce that this newsletter includes more detailed information about the schedule and events for the symposium.

The IUS 16th International Congress of Speleology is just around the corner, July 21–28, 2013, in Brno, Czech Republic. During this Congress the Commission on Volcanic Caves will discuss the 17th ISV in great detail. I suspect the Commission may also make a final determination about the location and date of the 17th ISV. There are several options on the table right now including (in alphabetical order): Argentina, Hawai'i and New Mexico.

I traveled to Hawai'i in February 2013 to meet with the Hawai'ian cavers and discuss the possibility of hosting the 17th ISV in Hawai'i in 2016 or 2017. I had the pleasure of staying the Ann and Peter Bosted on the Big Island, and caving with Mike Warner, Emily Davis, and many other local Hawai'ian cavers. There is no lack of either hospitality or caves on the Big Island of Hawai'i!

Additionally I scouted the Big Island of Hawai'i from the perspective of someone who is knowledgeable of the requirements for our organization's symposium. I looked at lodging options, meeting halls, travel distances, etc. My findings were forwarded to the Chairman, Jan-Paul. Fortunately there will be representatives from the Hawai'ian caving community at the Congress in Brno (e.g., Stephen Smith), so the details can be discussed in more detail.

I am sorry, but due to work requirements, I cannot attend the Brno Congress. I wish you the best, and have a great time in Brno!

Sincerely,
Harry A Marinakis
Vice Chairman



Hawai'i.



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U.I.S. COMMISSION ON VOLCANIC CAVES

The IUS Commission on Volcanic Caves announces, by popular demand:

16th International Symposium on Vulcanospeleology

Galápagos Islands, República del Ecuador

March 16–22, 2014

(with additional trips March 8–15 and March 24–30)



Hosted by

ECUCAVE (Caving Organization of Ecuador)

&

Conference Co-Chairs:

Theofilos Toulkeridis, Ph.D. / Aaron Addison, MSGISc

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Schedule for the 16th International Symposium on Vulcanospeleology

Pre-Symposium Trip

March 8–15, 2014

Limestone cave exploration on the mainland, Ecuador

The Vulcanospeleology Symposium

March 16–22, 2014

Puerto Ayora, Isla Santa Cruz, Galápagos Islands, República del Ecuador

Isla Isabela, Galápagos Islands, República del Ecuador

Post-Symposium Trip (Option 1)

March 24–30, 2014

Galápagos Snorkeling & Scuba Cruise

Post-Symposium Trip (Option 2)

March 24–30, 2014

Mainland karst & caving field trip

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Pre-Symposium Limestone Cave Trip (March 8–15, 2014)

The pre-symposium field trip is a special trip to explore Tayos Cave (limestone) on the mainland to produce a video documentary

Detailed Schedule:

March 8, 2014 – Arrive in Quito or Shell, República del Ecuador, and transfer to Shell

March 9 to 14, 2014 – Exploration of Tayos Cave and making of a documentary

March 15, 2014 – Arrive back in Quito

Notes:

- Cost: \$180 per person
- Space is limited
- You must provide your own transportation to Quito or Shell (if you fly to Quito then transportation to Shell will be provided)
- Helicopter flight to the cave is provided
- You will be camping in the cave
- There will be English & Spanish video teams to document the exploration of Tayos Cave
- Tayos Cave cannot be visited without special permit of the Army and the native indigenous villages
- Group dining
- Lead by Theofilos Toulkeridis and Aaron Addison



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U.I.S. COMMISSION ON VOLCANIC CAVES

16th International Symposium on Vulcanospeleology (March 16–22, 2014)

Detailed Schedule:

March 16, 2014 – Fly to Baltra and then transfer to Puerto Ayora. Evening cocktails.

March 17, 2014 – Symposium, Conferences, Posters. Dinner.

March 18, 2014 – Bellavista caves. BBQ Dinner.

March 19, 2014 – Caves at Premicias. Dinner at site.

March 20, 2014 – Royal Palm Cave. Transfer to Isabela Island. Dinner.

March 21, 2014 – Field trip visits to the caves of Southeast Sierra Negra, *or* vertical trip to Triple Volcan (see photo page 10).

March 22, 2014 – End of symposium. Early departure to Santa Cruz *or* optional guided tour to Sulfur mines, new volcanic fields & Volcan Chico on Isabela Island (no caving)

March 23, 2014 – Early departure to Santa Cruz. Charles Darwin Research Station.

Note: There will be field trips and caving every day from March 18 through March 21



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Transportation

1. You must arrange your own transportation to Baltra airport (GPS) in the Galápagos.

2. Commercial flights to Baltra (GPS) originate on the Ecuador mainland from either Quito (UIO) or Guayaquil (GYE) and cost about \$200 to \$400 round-trip.

3. Transfer to Puerto Ayora by taking the free bus from the Baltra airport to the ferry pier, ride the ferry to Santa Cruz Island, then either take the bus (VERY slow) or taxi (up to 4 persons per truck) across the island to Puerto Ayora.

4. The transfers between Baltra and Puerto Ayora are included in the symposium fee.

5. Plan to arrive in Puerto Ayora no later than March 16, 2014

6. Do not fly into San Cristobal.

7. Commercial air carriers that fly Baltra (GPS) include:

Aerogal: <http://www.aerogal.com.ec/>

LAN: <http://www.lan.com/>

Tame: <https://www.tame.com.ec/>



Puerto Ayora



Symposium Registration Fee

\$620 per person

Includes:

- 6 night's accommodations
- Welcome cocktails
- Symposium
- Transfer from/to Baltra airport
- Transport to/from the caves
- Breakfast, lunch boxes, dinners
- Laundry
- Boat transport to Isabela Island and back (consider sea sickness medication)

Extra Costs Not Included in the Symposium Registration Fee

1. Quito airport transit tax to Galápagos \$10
2. Galápagos National Park entry fee \$100 (cash only)
3. Fees for the **optional tour** on March 22 to the Sierra Negra volcano (sulphur fields and Volcán Chico) are extra and not included in the symposium fee:
 - a. Guide and transportation fees are approximately \$220 and will be split equally amongst the group (i.e., \$22 per person if there are 10 people).
 - b. There is also a fee of \$15 per person for your horse.
 - c. You will also be responsible for one night's lodging and your food on Isabela Island on March 22.

Lodging

For early arrivals to Puerto Ayora:

Lodging in Puerto Ayora varies considerably in price and quality, from \$15 to \$800 per night. Contact Dr. Theofilos Toulkeridis, Ph.D., for advice on specific bookings. His e-mail is:

theousfq@yahoo.com



Aaron Addison descends Triple Volcán
Photo by Peter Sprouse.



**Post-Symposium Cruise
(March 24-30, 2014)**

Option 1

1. This is a Galápagos snorkeling & scuba diving cruise
2. The cruise fee is \$1,535 and includes:
 - 5 nights accommodation on the boat
 - 4 days of guided scuba diving excursions
 - Two "one-tank" dives daily
 - Equipment rental
 - All meals onboard
 - Naturalist guide
 - Led by Jorge Mahauad

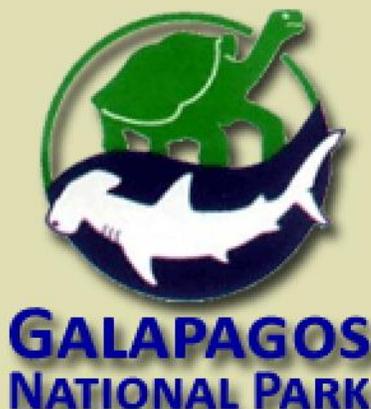
<http://www.tiptopdiving.com/>
3. Surface temps 18-25 C (64-77 F), may drop to 13 C (56 F) at depth (~20m or ~60 ft)
4. Departs from Puerto Ayora on March 24

**Post-Symposium Tour
(March 24-30, 2014)**

Option 2

1. This is a limestone karst and caving tour on the mainland Ecuador
2. The tour fee is \$360 and includes:
 - Transportation
 - Breakfast, lunch boxes, dinners
 - 5 nights accommodations
 - Entrance fees
 - Guides
3. This schedule is tentative, and may change to include trips to Tungurahua and Cotopaxi volcanoes to see pyroclastic flows, strombolian explosions, lahars and pyroclastic flows in action
4. Departs from Quito on March 24





Galápagos National Park

1. Please familiarize yourself with the **Rules for Visitors of the Galápagos Protected Area**:

http://www.galapagospark.org/nophprg.php?page=turismo_reglas_visitantes&set_lang=en

Money

1. The currency in Ecuador is U.S. dollars. Small bills such as \$10 and \$20 are required. Bills \$50 and larger will not be accepted anywhere.

2. The locals may not accept wrinkled, torn, or soiled bills.

3. In the Galápagos, there are four ATM machines in Puerto Ayora (max withdrawal \$100 per day per machine), although you may have to search for one that is working. There are no ATM machines on Isabela.

4. On the mainland, do not count on finding reliable ATM machines outside of major cities.

5. Credit cards are generally accepted on Santa Cruz. but not on Isabela.

Caving

1. The Galápagos caves are warm, 26–28 C (79–82 F)

2. Suggested caving wear includes: T-shirt, long pants (for crawling) or shorts over lightweight tights, leather gloves, knee pads, helmet and electric lights

3. There will be very little crawling

4. Bring vertical gear if you plan to drop Triple Volcan

5. If you are coming from the United States, please decontaminate your gear



<http://whitenosesyndrome.org/topics/decontamination>



PROTECT YOURSELF

Blistering sun burns are possible. Bring a good sun hat, SPF 50 sunscreen, zinc oxide, and a long-sleeve shirt to protect yourself from the powerful equatorial sun!



LETTERS RECEIVED

June 7, 2013

Dr. Van der Pas;

My name is Don Esker; I'm a vertebrate paleontologist at the Waco Mammoth Site, and a newly minted Ph.D. candidate at Baylor University. I'm looking for possible dissertation topics, and the volcanoes in and around Lake Nicaragua have piqued my interest as a potential study area. This holds excellent promise for paleontologists.

Nicaragua in general is in a paleontologically fascinating area; because it was near ground-zero for the American Biotic Interchange it represents the southern limit of a great many North American Pleistocene taxa (not least of which is *Mammuthus columbi*) and the northern limit for a great many South American taxa. Lake Nicaragua specifically has a great deal of charm for me because it contains some of the world's larger fresh-water islands, in one of the world's oldest extant lacustrine systems. It would be fascinating to see if there's enough reproductive isolation on these volcanic islands to have brought the Island Rule into play.

Lastly, as you well know in many parts of the world Paleogene and Neogene lava

tubes have proved to be excellent environments of fossil preservation in areas where it is otherwise unlikely. Most of the fossil record of the Hawaiian Islands has been found in conjunction with speleological surveys, and I've noted that your website hosts a PDF of a similar study done in the Galapagos. This trifecta of interesting local fauna, the potential for fresh-water island dwarfing or gigantism, and high preservation potential makes the area around Lake Nicaragua very, very attractive for me. Ultimately it's up to my advisor to determine what kind of research I do but someone definitely needs to find out if there any significant lava tubes in the area.

I'm writing to you to ask if you are aware of any research done on the lava tubes in this region - if there are any lava tubes. I've been unsuccessful thus far in finding any useful information on Nicaraguan lava tubes, save a few in Masaya National Park that are frequented by tourists to the area. As an expert in this field, is there any further information or advice you could impart? I would be most grateful.

Warmest Regards,

Don Esker
Waco Mammoth Site
City of Waco, TX
DonaldE@ci.waco.tx.us



Puako Beach, Kohala Coast
Big Island, Hawai'i



Trip Report: Hawai'i, February 2013

by Harry Marinakis

In February 2013 I had the pleasure of meeting our fellow vulcanospeleologists in Hawai'i.

My trip began with a week-long stay on the Kohala coast of the Big Island. During this week I went solo scuba diving off the Puako beaches and explored the underwater lava flows and pyroducts. The scenery was fascinating, with arches,

caverns, and pillow lava. Unfortunately, I did not bring my underwater camera (a mistake that I will not repeat!). The whales were in migration, so I was serenaded by whale songs during all of the dives.

During my third week in Hawai'i I moved to South Point. Ann and Peter Bosted graciously invited me to stay with them.



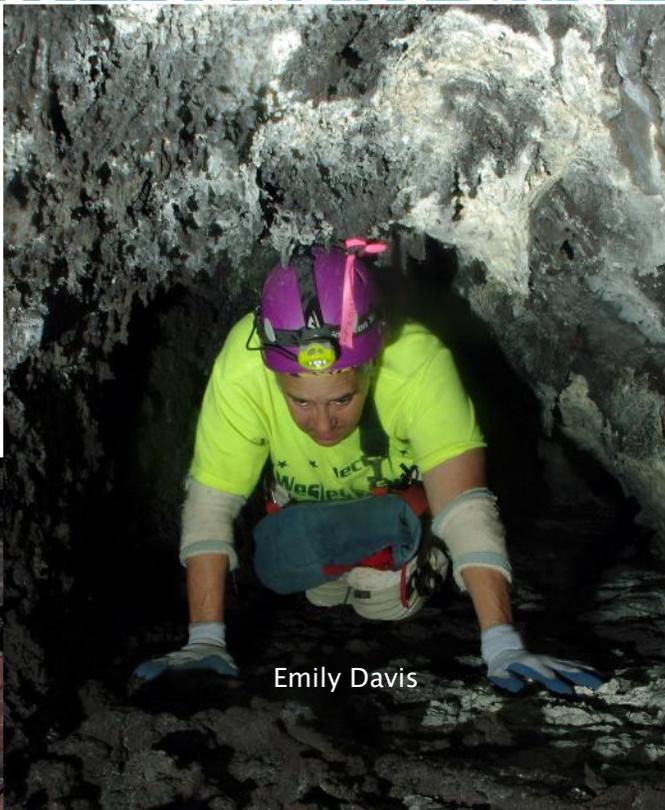
U.S. COMMISSION ON VOLCANIC CAVES

We made a couple of survey trips to a relatively new area of Hawai'i Volcanoes National Park. (See Keoko system survey in the 16th ICS Proceedings.)

Additionally I spent several days surveying with Emily Davis, Mike Warner and crew in the South Point area. THANK YOU EVERYONE FOR YOUR HOSPITALITY!



Mike Warner



Emily Davis



Peter and Ann Bosted

Fjársjóðir faldir í hellunum

● Árni B. Stefánsson, augnlæknir og hellakönnuður, hefur gert nákvæmt líkan af dýrustu perlu íslenskra hella – Þríhnúkaagíg ● Líkanið er nú til sýnis á sýningu Félags trérennismiða í Ráðhúsi Reykjavíkur

Guðni Einarsson
gudni@mbi.is

„Þetta er 12-14 milljóna króna verkmiðað við útseldan texta tveggja sérfræðinga sem unnu hjá sérstökum saksóknara, samkvæmt fréttum í fyrrihaust,“ sagði Árni B. Stefánsson, augnlæknir og hellakönnuður, glettnislega um líkan sitt af Þríhnúkaagíg. Vandvirknið gert líkanið er nú á sýningu Félags trérennismiða á Íslandi í Ráðhúsi Reykjavíkur. Síðasti sýningardagur er á morgun, 2. desember.

Líkanið er gert í hlutföllunum 1:100. Byggt er á mælingum VSO Ráðgjafar árið 2007 og á eigin mælingum og athugunum Árna árið 1991 og síðar. Hann seig fyrstur manna, svo vitað sé, niður í þessa tröllauknu hraunhvelvingu á Jónsmessu 1974. Gígurinn er sá dýpsti sinnar gerðar í heiminum og falinn undir yfirborðinu skammt vestur af Bláfjöllum.

„Upphaflega smíðaði ég líkanið til að aðvelja hönnun mannvirkja inni í gígnum. Núverandi útsersla hófðar hins vegar til myndunararfs og barnsins í okkur öllum,“ sagði Árni. „Innviðir líkansins eru mjög nákvæm eftirmynd af gígnum.“

Líkanið er smíðað úr 15 og 18 mm þykkum krossviðarplötum sem Árni sagði út og limdi saman. Hann þurfti að nota um 100 plötubúta til að ná réttari hæð líkansins. Árni notaði svo loftfresara til að fullvinna yfirborðið. Um 300-400 vinnustundir fóru í smíðina. Hann sagði þetta verkefni falla vel að yfirskrift sýningar Félags trérennismiða í Ráðhúsinu sem er „Skáldað í tré“.

Von er á niðurstöðu mats á umhverfisáhrifum vegna fyrirhugaðra framkvæmda við Þríhnúkaagíg fyrir eða um næstu áramót. Framkvæmdirnar eru hugsaðar til verndar gígnum og að því gefnu og í framhaldi að opna aðgengi fyrir ferðamenn. Hver sem niðurstaðan verður gerir Árni ráð fyrir að sýna líkanið aftur við það tækifæri, en þá með hugsanlegum mannvirkjum inni í gígnum.

Hver er Sigurður?

Við höfð líkansins á sýningunni í Ráðhúsinu er ljósrít af síðu Veiðvakanda í Morgunblaðinu 27. nóvember 1991. Fyrirsögn aðalgreinarinnar á síðunni er „Skipun ofan frá“ og þykir Árna hún téknræn. Þar undir er bréf frá manni sem heitir Sigurður undir fyrirsögninni „Opnum bláfjallageim“.

Árni segir að í stuttu bréfi Sigurðar sé í fyrsta sinn bent á þann möguleika að greiða ferðamönnum leið inn í Þríhnúkaagíg. Sigurður stingur upp á því að „ríkisjóðir leggi fram nokkuð fé til rannsóknar á hvelvingunni sjálfri með það fyrir augum, að opnað verði leið inn í hana með jarðgöngum. Þá fyrst höfum við eignast nýja náttúrumerki. Það hlýtur að verða stór-“



Þríhnúkaagígur Árni B. Stefánsson, augnlæknir og hellakönnuður, við líkan sitt af Þríhnúkaagíg. Líkanið er gert í hlutföllunum 1:100 og er mjög nákvæm eftirmynd af gígnum innanverðum. Árni úthjól lok sem falla nákvæmlega í opnið framan á líkaninu. Að aftanverðu eru lok í opum þar sem kemur til greina að opna leið inn í gíginn í gegnum iarbörð. Árni hefur einnig smíðað líkan að hugsanlegum mannvirkjum inni í gígnum, en þau verða sýnd síðar.



Gímaldið Mennirnir eru smáir samborið við Þríhnúkaagíg sem er um 150 þúsund rúmmetrar að innanmáli.



Tröllvaxið í líkaninu eru tvö furðu lostin tröll að skóða mannríði. Stærð tröllanna samsvarar 5 og 7 hæða húsum.

Árni B. Stefánsson with a model that he made of the underground chamber of Þríhnúkaagígur, Iceland. He presented it at the biannual show of the Woodturners Guild of Iceland and it got a favorable coverage in Morgunblaðið. (See the Commission on Volcanic Caves e-Newsletter No. 62, November 2011.)





C



D



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PHOTO LEGEND

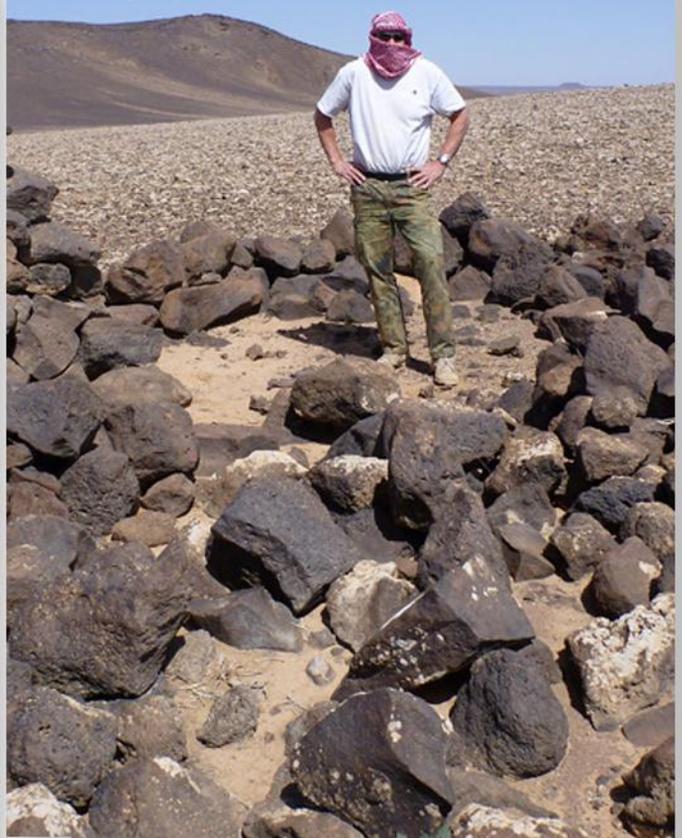
A: Cavers in Japan. Photos by Takayoshi Katsumata.

B: Cavers in Japan. Photo by Takayoshi Katsumata.

C: Cavers in Japan. Photo by Takayoshi Katsumata.

D: The remains of a dyke, Hvítserkur in Húnafjörður, at the eastern side of Vatnsnes. Icebear tracks were found at Vatnsnes this summer. Photo by Árni B. Stefánsson .

Ingo at Kempe Volcano, Jordan
Photo by Julia James



15th International Symposium on Vulcanospeleology, Jordan (2012)
Photo by Paul Zehnder





Payunia will be a World Heritage (UNESCO) Site Argentinian Speleology will collaborate with its experience and discoveries

by

Carlos Benedetto. Federación Argentina de Espeleología – FAdeE

In April 2012, shortly after completion of the IV Argentine Congress of Speleology and I Latinoamericano in Malargüe, Mendoza met municipal and provincial authorities with volcanologists and representatives of Argentina's delegation to UNESCO. At that meeting the cavers participated as external observers, but then, in late May, the FAdeE presented at the UNESCO office in Buenos Aires, a letter of support for the initiative of making Payunia in World Heritage, as also made available to the international body of your registration volcanic caves of the region.

Payunia is a plateau of more than 600 volcanoes retroarc formed in the Pleistocene, most of them within the territory of the province of Mendoza. However, these basaltic volcanism reach the provinces of Neuquén (to the South) and La Pampa (to the East), and all of them have been detected lava tubes. It is in these lava tubes, not in caves in gypsum and limestone Malargüe, where it has been detected so far endemic fauna (troglitic?) Which is currently under study. The

Argentina Federation of Speleology proposed to take into account the biological aspects of this heritage to be protected, which was not in the original project. The region is a tourist destination and it is proposed that is also a tourist destination-caving and caving, but with adequate controls. In this framework, the FAdeE has also proposed to the Commission of Volcanospeleology of the International Union of Speleology UIS, the respective 2016 or 2018 symposium to be held in Malargüe. FAdeE was also incorporated to the team of Dr. Raúl Mikkan (National University of Cuyo), to elaborate the dossier that national President will give to the UNESCO in 2014.



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U.S. COMMISSION ON VOLCANIC CAVES

SPELEO CALENDAR
2013

SPELEO CALENDAR
2014

**16th INTERNATIONAL
CONGRESS OF SPELEOLOGY**



WHERE HISTORY MEETS FUTURE

July 21-28, 2013

<http://www.speleo2013.com>

**16th INTERNATIONAL
SYMPOSIUM ON VULCANOSPELEOLOGY**

Pre-Symposium Caving Trip

March 8-15, 2014

Quito, República del Ecuador

Symposium on Vulcanospeleology

March 16-22, 2014

Puerto Ayora, Galápagos Islands

Post-Symposium Cruise

March 24-30, 2014

Puerto Ayora, Galápagos Islands

Post-Symposium Krast & Caving Tour

March 24-30, 2014

Quito, República del Ecuador

Kempe Volcano, Jordan

15th International Symposium on Vulcanospeleology (2012)

Photo by Marjorie Coggan



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U.I.S. COMMISSION ON VOLCANIC CAVES

1972 U.S.A.

1975 CATANIA

1982 U.S.A.

1983 CATANIA

1986 JAPAN

1991 U.S.A.

1994 CANARY IS.

1998 KENYA

1999 CATANIA

2002 ICELAND

2004 AZORES

2006 MEXICO

2008 KOREA

2010 AUSTRALIA

2012 JORDAN

2014 ECUADOR



VULCANOSPELEOLOGY
SYMPOSIA

