

N° 62  
November 2011



Union Internationale de Spéléologie (UIS)  
Commission on Volcanic Caves

**NEWSLETTER**



e-NEWSLETTER  
 U.S. COMMISSION ON VOLCANIC CAVES

No. 62 - November 2011

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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.



# U.I.S. COMMISSION ON VOLCANIC CAVES



## U.I.S. COMMISSION ON VOLCANIC CAVES

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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).



## MESSAGE FROM THE VICE-CHAIRMAN

Greetings to the Commission:

The 15<sup>th</sup> International Symposium on Vulcanospeleology in Amman, Jordan is only four months away.

The front page of the web site of Hashemite University has a link (in the lower right corner) to details of the symposium, tours and registration.

Here is the link: <http://hu.edu.jo/>

Please note that some of the contact information for Dr. Ahmad Al-Malabeh has been updated. The information contained on the web site, and this newsletter, reflects the updated information.

Also, this is a friendly reminder to please get those symposium abstracts to Dr. Ahmad Al-Malabeh as soon as possible.

Please check you passports, visas and airline reservations. We will see you Amman!

In regards to this e-newsletter, I have struggling to make everyone happy. I appreciate all comments and criticisms as we try to make this e-newsletter as good as possible. I will continue to make changes and improvements as the comments roll in.

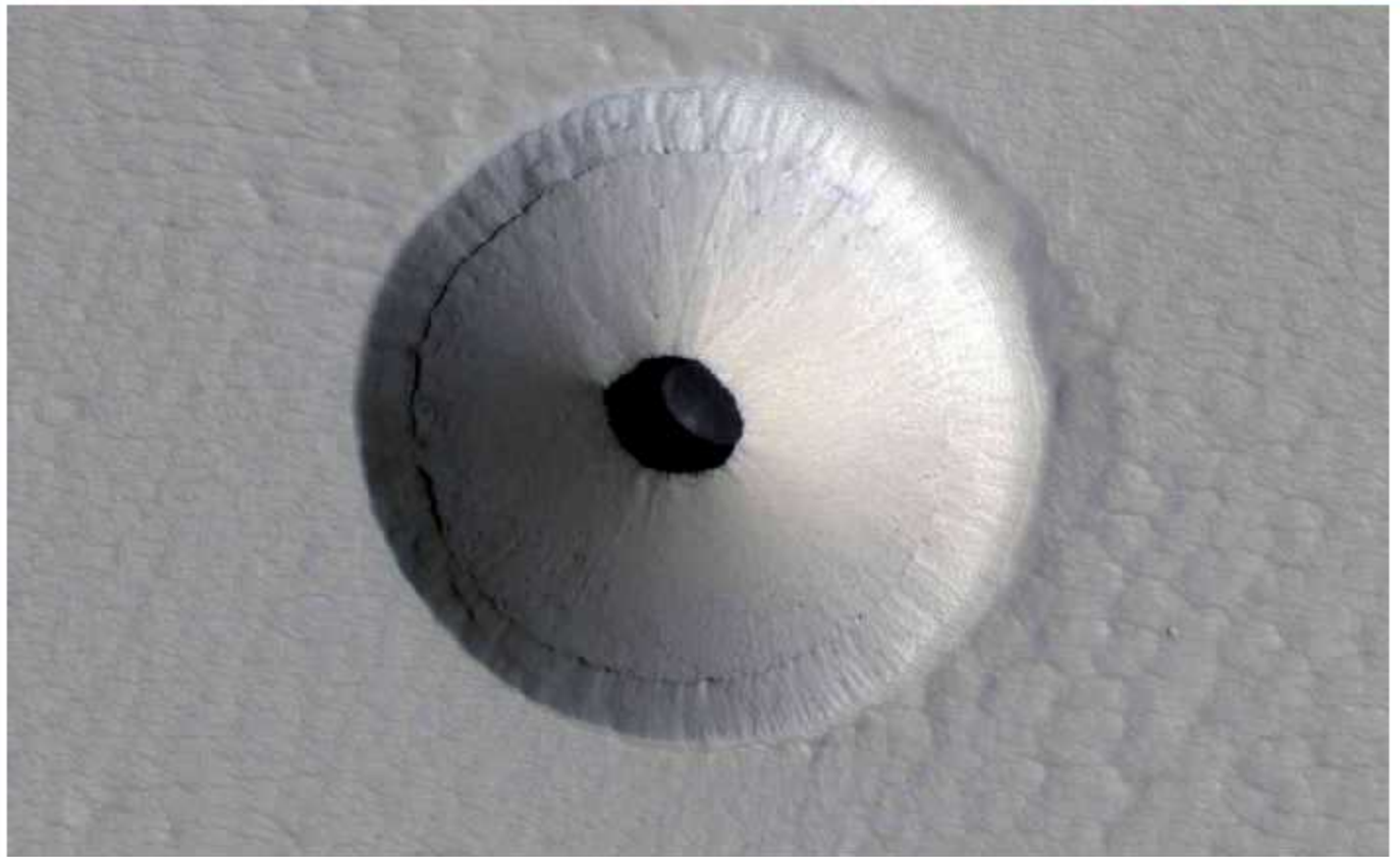
I have attempted to develop a "printer friendly" version of the newsletter for those of you who want paper copies. I understand that all of the colorful borders and blocks eat up your printer's ink.

Thankfully, Adobe Photoshop makes it easy for me to use templates and layers to prepare two versions of the e-newsletter: the full-color online version and a "printer friendly" version that is almost black & white.

I have chosen to leave the photos in color for the "printer friendly" version. This way you can still print the nice photos in color but not consume all of your printer's ink on extraneous color borders.

Let me know what you think.

Cheers,  
Harry Marinakis



## More Martian Caves

HiRISE Cameras reveal more pits and caves on the Pavonis Mons volcano

The High Resolution Imaging Science Experiment (HiRISE) camera is a 0.5 meter reflecting telescope onboard the spacecraft Mars Reconnaissance Orbiter (MRO). Resolution is about 1 foot.

Earlier this year, the HiRISE camera found a pit (shown above) on the slopes of the Pavonis Mons volcano.

Later this year HiRISE will obtain a stereo image of this pit.

A detailed view of the pit follows.

The original article is available on the HiRISE website at:

[http://hirise.lpl.arizona.edu/ESP\\_02353\\_1\\_1840](http://hirise.lpl.arizona.edu/ESP_02353_1_1840)



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A detailed view of the pit on the Pavonis Mons volcano on Mars. The skylight is 35 meters (115 feet) in diameter). The shadow cast on the floor of the cave suggests a depth of 20 meters (65 feet) according to scientists.

[http://hirise.lpl.arizona.edu/images/wallpaper/2560/ESP\\_023531\\_1840.jpg](http://hirise.lpl.arizona.edu/images/wallpaper/2560/ESP_023531_1840.jpg)





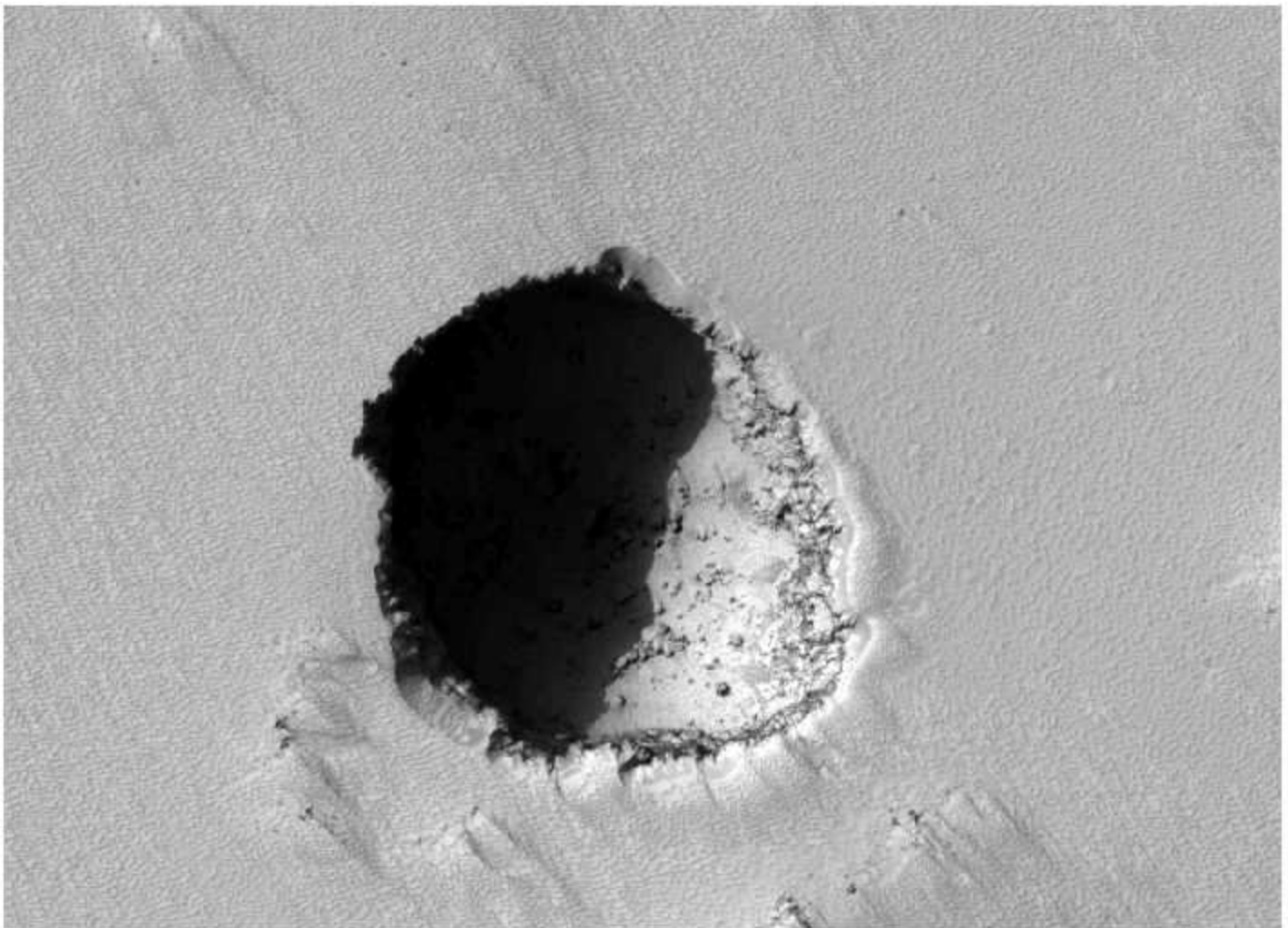
## Another Cave on Pavonis Mons

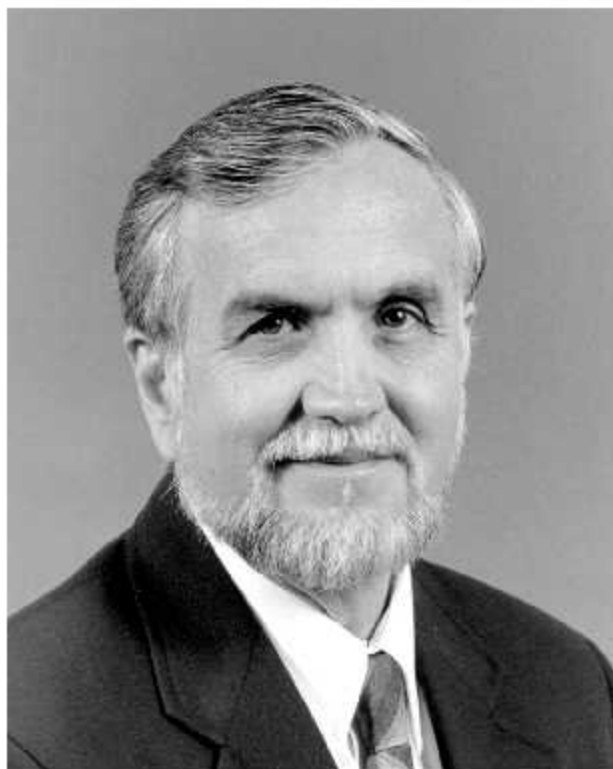
The HiRISE camera took detailed photos of another lava pit on the southeastern flank of Pavonis Mons volcano located in the Tharsis Region of Mars. The collapse pit is about 180 meters at its widest diameter.

The floor of the pit slopes downward towards the northwest, suggesting that is the direction of the cave.

The original article is available on the HiRISE website at:

[http://hirise.lpl.arizona.edu/ESP\\_01935\\_1\\_1795](http://hirise.lpl.arizona.edu/ESP_01935_1_1795)





## Dr. Ronald Greeley

Ronald Greeley, 72, passed away unexpectedly in his Tempe, Arizona home on October 27, 2011.

Ron was born in Columbus, Ohio, and was the son of the late Edward Thomas and Elizabeth Graf Greeley. He is survived by his high school sweetheart and wife of 51 years, Cynthia (Cindy) Moody Greeley, his son Randall (Lidiette) Greeley of Mesa, AZ and grandchildren Thomas Greeley of Mesa, Rebecca (Houston) Tanner of Provo, Utah, and Jennifer Greeley of Mesa.

He was preceded in death by daughter Vanessa Greeley. He is also survived by two brothers, Tom (Ruth) Greeley of Mobile, AL and Dennis (Gail) Greeley of Chandler, AZ and their families.

Ron graduated from high school in Gulfport, MS, received his undergraduate and graduate degrees in geology from Mississippi State University, and his doctorate from the University of Missouri at Rolla. Ron was a planetary geologist and Regent's Professor at Arizona State University.

He has been involved in lunar and planetary missions since 1967 when he worked at NASA's Ames Research Center in preparation for the Apollo missions to the Moon. His research in planetary geology has contributed significantly to our understanding of planetary bodies within our solar system. Ron began teaching at ASU in 1977 with a joint professorship in the Department of Geology and the Center for Meteorite Studies. He was a pioneer in the planetary geology field, served as the director of the NASA-ASU Regional Planetary Image Facility and principal investigator of the Planetary Aeolian Laboratory at NASA-Ames Research Center.





Dr. Greeley served on and chaired many NASA and National Academy of Science panels and he was involved in nearly every major space probe mission flown in the solar system since the Apollo Moon landings. Mission projects included the Galileo mission to Jupiter, Viking mission to Mars, Mars Pathfinder mission, Mars Global Surveyor, the Mars Exploration Rovers, and the European Mars Express mission.

He was an Overseas Fellow, Churchill College, Cambridge University, England and a Research Fellow of the University of London Observatory, London, England.

Ron always enjoyed the outdoors and loved camping, canoeing, white-water rafting and traveling with his family.

A celebration of Ron's life will be held on Monday, November 7  
Church of Jesus Christ of Latter-Day Saints  
2707 S. College Ave.  
Tempe, AZ 85282

(corner of College and Alameda). All are welcome.

Visitation is 2:30 to 3:45 with the memorial service beginning at 4:00 pm. Interment will be in Gulfport, MS at a later date.

In lieu of flowers, the family suggests memorial donations to the ASU Foundation for the Ronald Greeley Memorial Endowment, c/o

School of Earth and Space Exploration  
P.O. Box 871404  
Arizona State University  
Tempe, AZ 85287-1401



<http://news.nationalgeographic.com/news/2011/04/pictures/110407-volcano-first-descent-magma-chamber-geographic-lava-iceland/>

The enormous size of the volcanic chamber is difficult to comprehend. In one of the photos you can see the yellow basket used to haul people up and down the 120-meter (400-foot) drop.

*(The photo to the left is from the National Geographic, 2010. Árni and Jan Paul were prohibited from taking photos inside of the cave. The photo below is courtesy of Gunnhilda Stefánsdóttir.)*

## National Geographic Descends into Þríhnúkagígur, Iceland

In September 2010 Árni B. Stefánsson and Jan Paul van der Pas descended in Þríhnúkagígur in Iceland as part of the National Geographic expedition (see the commission's e-Newsletter No. 59, November 2010).

National Geographic published photos and video of this expedition online at the following web site:





PHOTO GALLERY



A



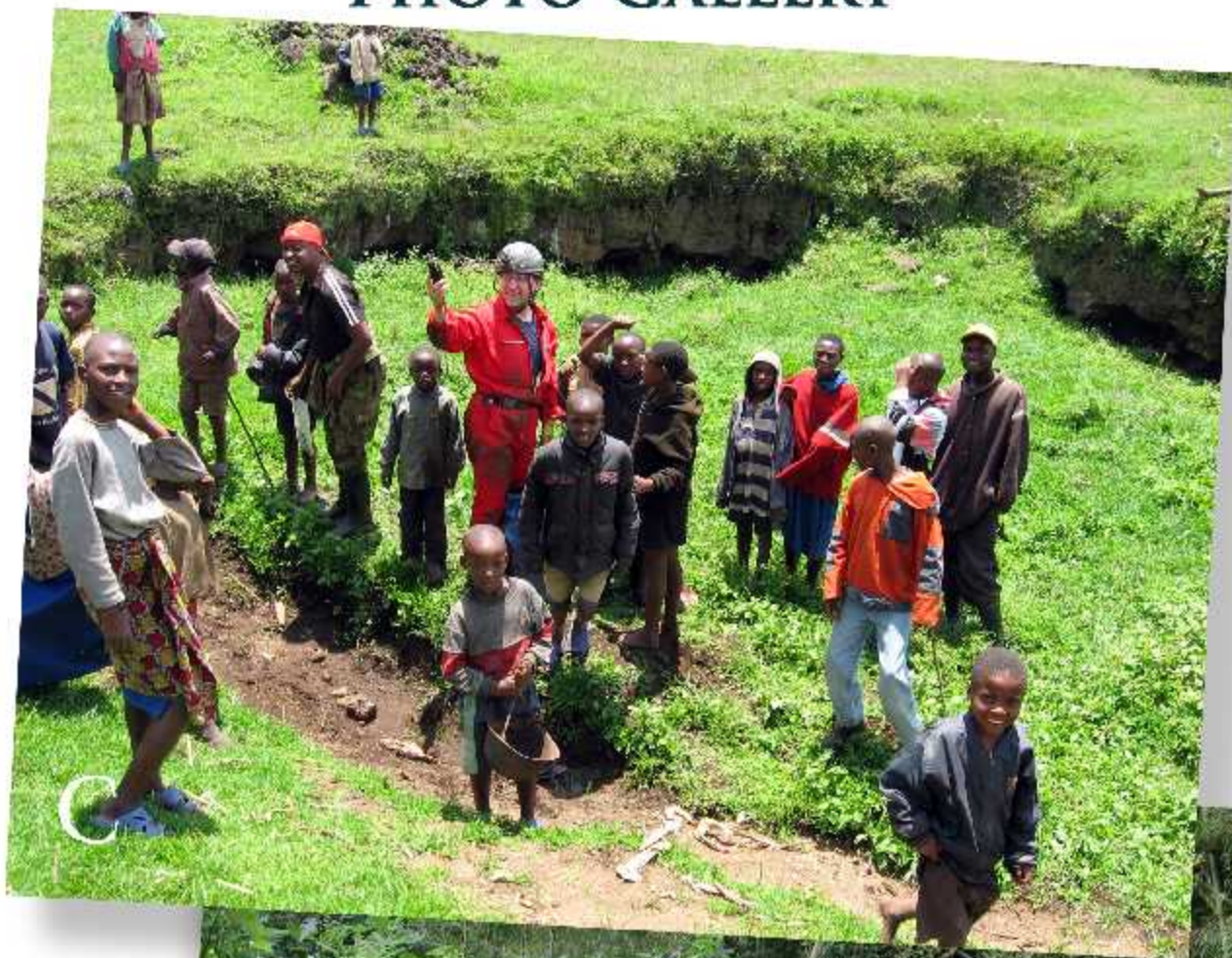
B





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PHOTO GALLERY

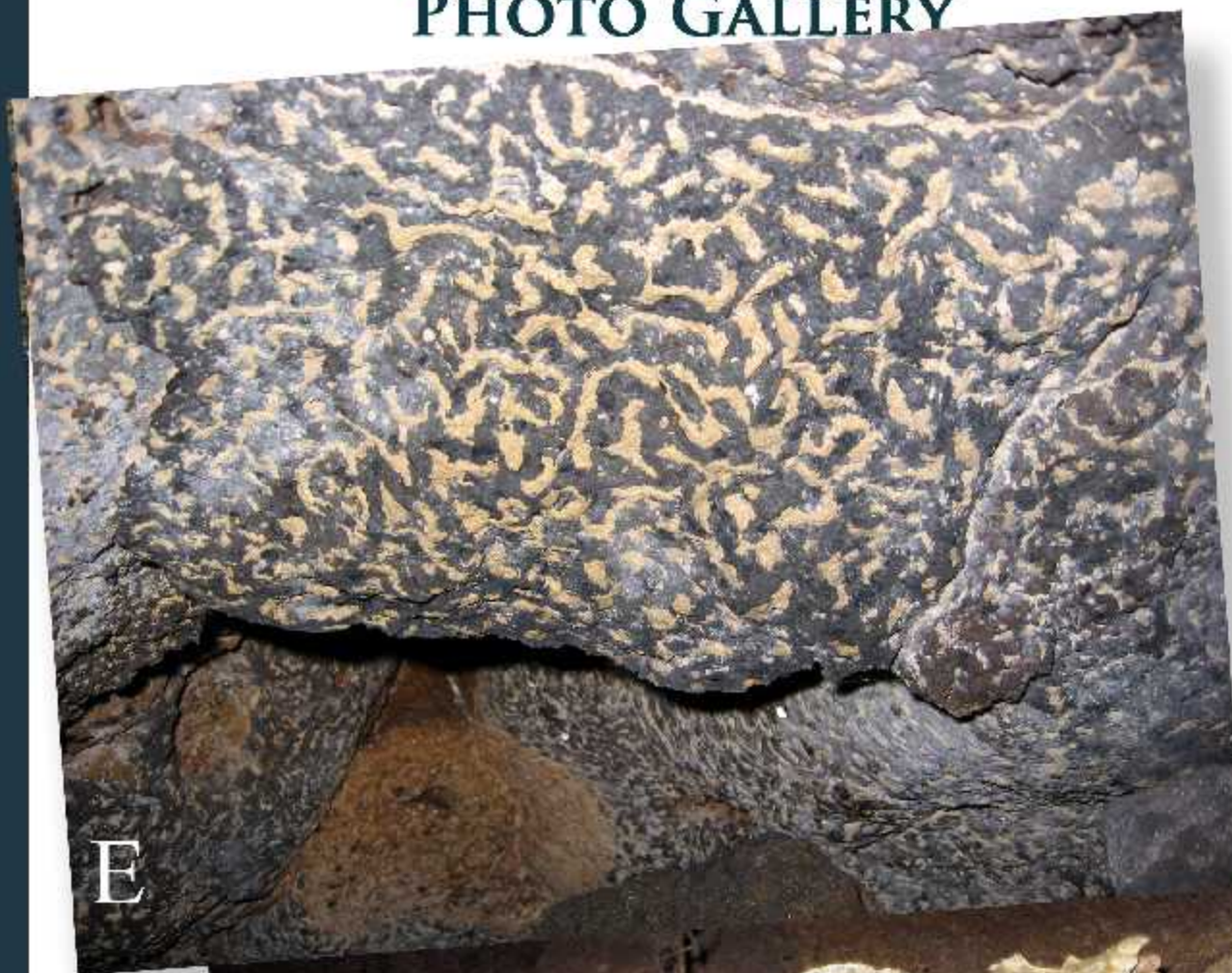






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PHOTO GALLERY

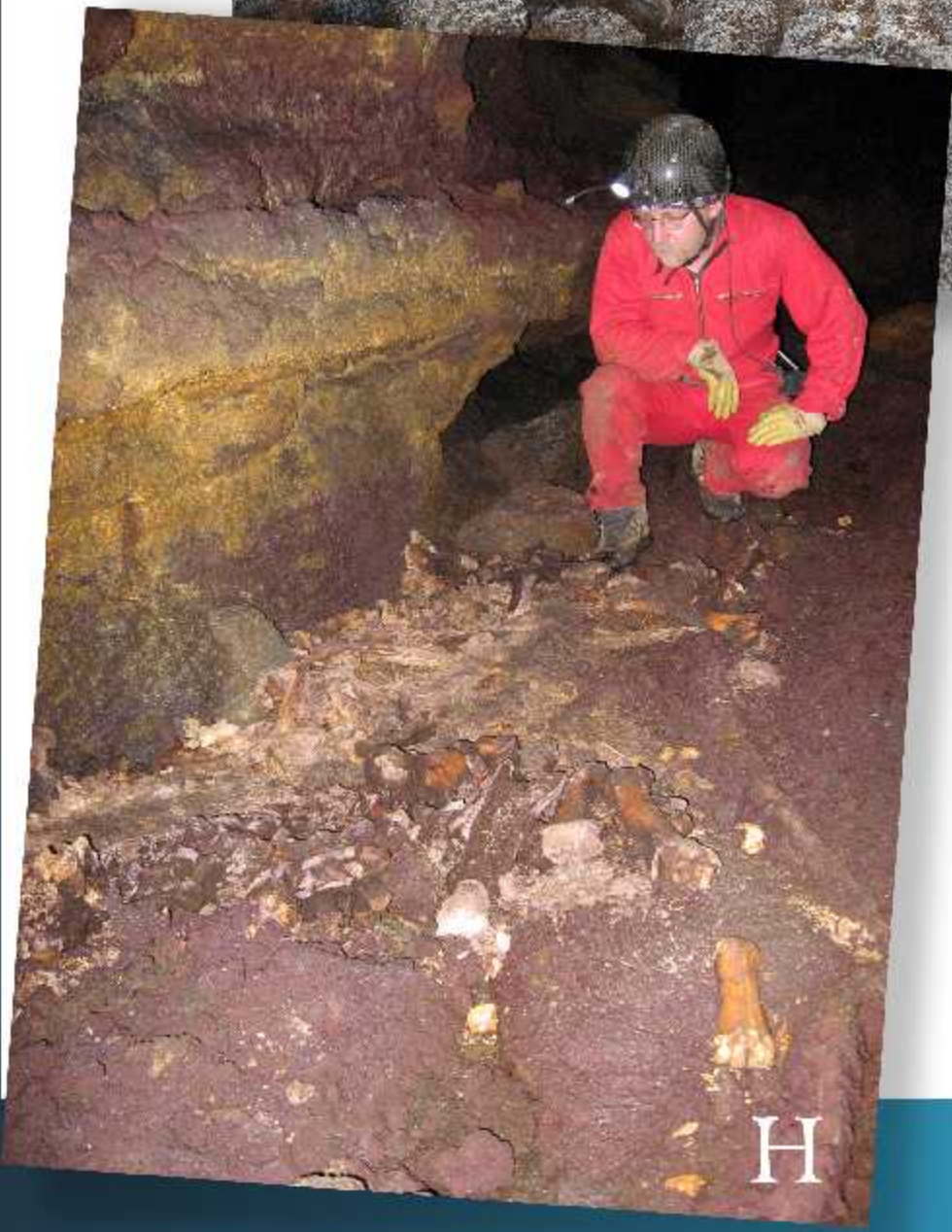


E



F







## PHOTO GALLERY CAPTIONS

A: Japanese cavers. (Photo by Takayoshi Katsumata.)

B: Rwanda Lava Caves 2007 – Michael Laumanns (Germany), expedition leader, and in the back-ground our driver, guide, translator and much more – Francis. He is now the only guy in Rwanda who has seen all known cave entrances. (Photo by Jan Paul van der Pas.)

C: Rwanda Lava Caves 2007 – Michael Laumanns (Germany) taking a GPS reading. The spectators believe he is talking to high ranking officials. (Photo by Jan Paul van der Pas.)

D: Rwanda Lava Caves 2007 – In the Kibumbu Crater. Cutting a way through the bush, looking for (and finding) caves. (Photo by Jan Paul van der Pas.)

F: Rwanda Lava Caves 2007. (Photo by Jan Paul van der Pas.)

E: Rwanda Lava Caves 2007 – A possible relic of the Rwanda civil war. (Photo by Jan Paul van der Pas.)

G: Rwanda Lava Caves 2007 – Lave tube in a tube. (Photo by Jan Paul van der Pas.)

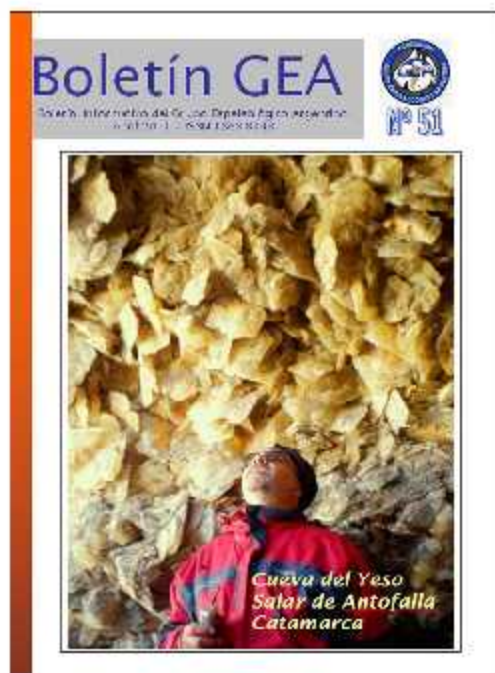
H: Bones very deep in the Ubovumo Cave system. (Photo by Jan Paul van der Pas.)

## PUBLICATIONS RECEIVED BY THE COMMISSION

### **Argentine Speleological Group (GEA) Bulletin #51 April 2011**

Available for download at:

<https://sites.google.com/a/gea.org.ar/web/faqs/boletin-gea/BOLGEA51.pdf?attredirects=0&d=1>



**GUIDE TO THE VOLCANIC CAVES OF  
KILIMANJARO, TANZANIA**  
**REPORT ON THE LAVA TUBES OF MAWENZI**



**BY**

**JIM W SIMONS and CLIVE WARD**

**CAVE EXPLORATION GROUP OF EAST AFRICA**  
(Nairobi, Kenya. June, 2011)



## GUIDE TO THE VOLCANIC CAVES OF KILIMANJARO

Jim W. Simons and Clive Ward of the Cave Exploration Group of East Africa (CEGEA) just published a new guide to the volcanic caves of Kilimanjaro. The guide includes updates from the 2011 Mount Kilimanjaro Expedition (see the commission's e-newsletter No. 59, November 2010).

We are also happy to inform you that a new issue of the CEGEA Bulletin "Speleophant" has also been published, the first issue since 1982.

[Guide to the Volcanic Caves of Kilimanjaro](#), computer-generated pamphlet, 34 pages with 11 color plates. Price is K.Shs. 1,800 plus shipping.

[Speleophant](#), Volume 7 (2010), computer-generated pamphlet, 33 pages with various black-and-white photos and maps. Price is K.Shs. 1,200 plus shipping.

To purchase, contact:

Jim W. Simons

[jim.william.simons@gmail.com](mailto:jim.william.simons@gmail.com)





You are invited  
to the



15th

# INTERNATIONAL SYMPOSIUM ON VULCANOSPELEOLOGY

March 15 – 22, 2012 in Amman, Jordan



<http://hu.edu.jo/>

Organized by

THE HASHEMITE UNIVERSITY & JORDANIAN GEOLOGISTS ASSOCIATION  
Held in the Royal Culture Center  
Amman, Jordan

President of the Organizing Committee  
Prof. Dr. Ahmad Al-Malabeh  
The Hashemite University



## Proposed Symposium Schedule March 2012



- March 14:** Arrival in Amman
- March 15:** Opening presentations and dinner
- March 16:** Day excursions
- March 17:** Presentations
- March 18:** Presentations, sessions & concluding dinner
- March 19-22:** Harrat (desert) excursion



**New  
Information!**

### Registration & Information

**Prof. Dr. Ahmad Al-Malabeh**

P.O. Box 150459, Postal Code 13115

ZARKA - Jordan

Tel.: + 962-5-390333 Ext. 4868 or 4330

Fax: +962-5-3823333

[malabeh.spleo12@yahoo.com](mailto:malabeh.spleo12@yahoo.com)





## Proposed Field Trips & Tours



There will be three field trips offered during the symposium and one post-symposium field trip as well as general interest tours (a minimum of 10 participants is required for each tour to be run).

### Field Trips During the Symposium:

#### **V1: Yarmouk-Decapolis Tunnel (March 16, 2012)**

Topics: Aqueduct, Weirs, Canals and Underground tunnels  
Route: Amman, Irbidi, Al-Tura, Wadi shallah, Hobras and Umm Quis.  
Leaders: Prof. Dr. Ahmad Al-Malabeh & Geol. Akram Abu Shanab  
Price: € 100 Euro per person

#### **V2: Geo-Eco Tourism (March 16, 2012)**

Topics: Old Iron Mines (Saladin), Karst Cave (Bergish), Upper Cretaceous in north Jordan.  
Route: Amman, Ajlun, Deer Abu Sa'ied  
Leaders: Ahmad Al-Shriedeh.  
Price: € 75 Euro per person.

#### **V3: Dead Sea (March 16, 2012)**

Topics: Jordan Graben, Dead Sea, Lisan, Saramuj Conglomerate.  
Route: Amman, Dead Sea, Ghor Haditha, Ghor Safi.  
Leaders: Prof. Dr. Eid Al-Tarazi  
Price: € 100 Euro per person.





## Post-Symposium Field Trip



### Basaltic Harrat (March 19–22, 2012)

Price: € 150 Euro per person.

1. Drive to Safawi, visit Qais Volcano and caves (Al Howa, Azzam Cave etc.) and Badia Cave on the way
2. Desert trip Jawa (Bronze Age City) and Al-Fahda Cave
3. Desert Trip Eastern Harrat Rim, K-Cave and Shield Volcano, Kites, Safaitic inscriptions
4. Pressure Ridge Caves and Al-Ahmed Cave and Return to Amman.





## Other General Interest Tours :

### A1: Amman Through History

Topics: Palaeolithic, Roman, Byzantine, Islamic.

Leader: Travel Agency.

Price: € 25 Euro per person.

### A2: Jadara

Topics: Old city of Umm Qais.

Leader: Travel Agency.

Price: € 50 Euro per person.

### A3: Jarasa

Topics: Roman city of Jarash.

Leader: Travel Agency.

Price: € 50 Euro per person.

### A4: Petra

Topics: Nabataean city of Petra.

Leader: Travel Agency.

Price: € 100 Euro per person (including entrance fees).



*Petra*  
by Berthold Werner

## Dates and Deadlines

SEPTEMBER 31, 2011: Submission of abstracts.

DECEMBER 1, 2011: Full manuscript.

## Registration Fees

The symposium fees (€ 200) include registration, a book of abstracts and participation in the scientific activities (€ 300 if paid after December, 31. 2011).





# Les tunnels de lave

Les laves assez fluides s'écoulent en créant des tunnels sur les flancs du volcan. Ces tubes se vident à la fin des éruptions, laissant des galeries pleines de curieuses structures de lave solide. Ils sont nombreux en Islande.

Michel Detay et Björn Hróarsson

1. LE TUNNEL DE LAVE DE PEBLUR, en Islande, se situe dans le réseau de laves de l'ère tertiaire en Islande. Ce passage résistent à plusieurs décennies de saignées. Les laves sont très visqueuses, ce qui leur permet de former des tunnels de lave. Le tunnel de lave tertiaire de Peblur, qui est en ce qui précède, a été découvert en 1908 par un mineur local. Les laves sont marquées des traces de la lave coulé (des pépales) cassés. Ici, la lave coulé (des pépales) cassés. Ici, la lave coulé (des pépales) cassés.



2 | Géologie

Le Point Science # 20 - Janvier 2011

Comment voyez-vous les tunnels de lave ? Ces tunnels se forment sur les flancs de certains volcans, au sein d'écoulements de lave qui refroidissent et se solidifient sur les côtés, tandis que le lave coulé en leur centre. Quand ces courants s'arrêtent, ils laissent derrière eux des tunnels de lave. Comment se forment ces structures ? C'est ce que nous essayons de découvrir dans cet article.

La formation des tunnels de lave est un processus complexe, qui dépend de nombreux facteurs, tels que la viscosité de la lave, la température, la vitesse de l'écoulement, etc. Les tunnels de lave sont généralement formés par la lave qui coule à l'intérieur d'un conduit, tandis que les laves qui coulent à l'extérieur se solidifient et forment les parois du tunnel.

Les volcans les plus actifs au monde sont ceux qui ont des tunnels de lave. Ces tunnels sont généralement formés par la lave qui coule à l'intérieur d'un conduit, tandis que les laves qui coulent à l'extérieur se solidifient et forment les parois du tunnel.

Pour que des tunnels de lave se forment, il faut que la lave soit suffisamment fluide pour couler, et qu'elle se refroidisse suffisamment vite pour former des parois solides. Les tunnels de lave sont généralement formés par la lave qui coule à l'intérieur d'un conduit, tandis que les laves qui coulent à l'extérieur se solidifient et forment les parois du tunnel.

Il arrive que ces tunnels s'effondrent, ce qui peut être dangereux pour les visiteurs. Les tunnels de lave sont généralement formés par la lave qui coule à l'intérieur d'un conduit, tandis que les laves qui coulent à l'extérieur se solidifient et forment les parois du tunnel.

### L'ESSENTIEL

- 4 Un tunnel de lave est un conduit souterrain de lave fluide.
- 4 Un tel tunnel peut être très dangereux, surtout si la lave est encore chaude.
- 4 Les laves peuvent être très visqueuses, ce qui leur permet de former des tunnels.
- 4 Pour les tunnels de lave, la température est généralement comprise entre 1000 et 1200 °C.
- 4 Les tunnels de lave sont généralement formés par la lave qui coule à l'intérieur d'un conduit, tandis que les laves qui coulent à l'extérieur se solidifient et forment les parois du tunnel.

Le Point Science # 20 - Janvier 2011

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## PUBLICATIONS RECEIVED BY THE COMMISSION

New Paper on Icelandic lava tubes  
By  
M. Detay and B. Hróarsson

Published (in Italian) in "Le Scienze," the Italian edition of the "Scientific American".





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U.S. COMMISSION ON VOLCANIC CAVES

SPELEO CALENDAR  
2012

SPELEO CALENDAR  
2013



XV International Symposium on  
Vulcanospeleology  
Amman, Jordan  
March 15-22, 2012

[www.vulcanospeleology.org](http://www.vulcanospeleology.org)

[www.jo-geologists.com](http://www.jo-geologists.com)



Argentine Congress of Speleology IV & First  
Latin American Congress of Speleology  
Malargue, Mendoza – Argentina  
April 1-8, 2012

<http://www.fade.org.ar/>

**16th INTERNATIONAL  
CONGRESS OF SPELEOLOGY**



WHERE HISTORY MEETS FUTURE

16<sup>th</sup> International Congress of Speleology  
Brno, Czech Republic  
July 21-28, 2013

<http://www.speleo2013.com>

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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



**VULCANOSPELEOLOGY  
SYMPOSIA**

