

No. 67

November 2013



Union Internationale de Spéléologie (UIS)
Commission on Volcanic Caves

e-NEWSLETTER

No. 67 - November 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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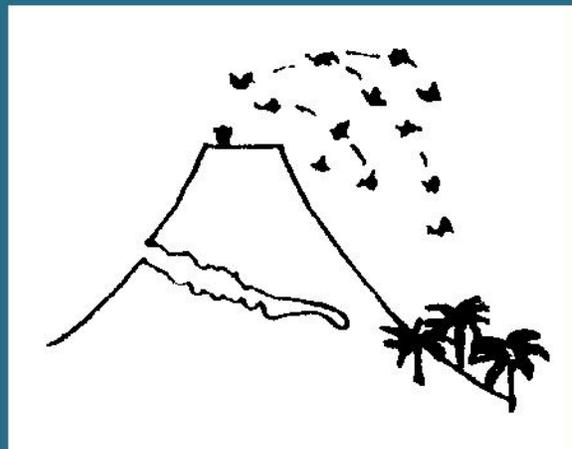
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MISSION STATEMENT

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

BRNO 2013

Current situation of the commission:

The committee has a new member:

Greg Middleton of Tasmania,
Australia,

ozspeleo@iinet.au.

Chairman: Jan-Paul van der Pas –

jpgvanderpas@hetnet.nl.

Vice chairman: Harry Marinakis –
harrymarin@gmail.com. Harry takes
care of our Newsletter.

So we have now staff on three
continents.

During the Brno congress there were
(at least) 5 lectures concerning

volcanic caves:

Bella/Gaál – Genetic Types of Non-
Solution Caves

Kempe/Bosted – Kahuenaha Nui – a
cave developed in four different lava
flows

Bosted et al. – Keokeo Lava Tube System
in Hawaii,

Addison et al. – Recent Investigations in
the Gálapagos Islands,

Woo et al. – Natural and Cultural
Heritage Values of the Yongcheon Lava
Tube.

The commission received a grant from
U.I.S. to cover the cost of the web-side
domain name. This web-side is perfectly
maintained by John Pint :

<http://www.vulcanospeleology.org>

Future symposia of the commission
were discussed. Next one will be on
Gálapagos in March 2014. Final data will
be soon published. Aaron Addison gave
a lecture during the congress, and
answered questions during the
commission meeting.

Offers for next symposia are Hawaii,
maybe 2016, New Mexico (U.S.A.), and
Argentina. The Argentina symposium
however would be a part of a national
congress.

16th International Symposium on Vulcanospeleology

Website: <http://geo1.espe.edu.ec/16th-ivs-galapagos/>



Galápagos Islands, República del Ecuador
March 16–22, 2014

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 Expedition (March 8–15, 2014)

–Pre-symposium science, exploration and mapping expedition. Details page 6.

Vulcanospeleology Symposium (March 16–22, 2014)

–Puerto Ayora, Isla Santa Cruz & Isla Isabela, Galápagos Islands. Details page 7.

Post-Symposium Cruise (March 24–28, 2014)

–Post-symposium Galapagos cruise through the Galapagos Islands. Details on pages 8 through 9.

*There have been significant changes to the schedule and activities that were published in the previous e-Newsletter.



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Independent Pre-Symposium Activities

The host organizing team arrives in the Galapagos Islands on March 8, 2014.

The hosts can assist people who arrive early with a variety of independent tours and activities in the Galapagos Islands. All pre-symposium activities and expenses are separate from the symposium and are not included in the symposium fee. Please contact:

Aaron Addison (activities)
aaddison@wustl.edu

Theofilos Toulkeridis (activities and accommodations)
theousfg@yahoo.com

Jorge A. Mahauad (snorkeling and scuba)
jorgeantonio@gmail.com

Pre-symposium Science & Exploration Expedition (March 8–15, 2014)

There is a limited number of openings for a pre-symposium science, exploration and mapping expedition in Galapagos.

Aaron anticipates 5–6 openings for cave survey, but if someone brings particular skill (biology, vulcanology, photography) to the expedition, then Aaron is open to a conversation about that. All expenses will be separate from the symposium and are TBD.

Contact:

Aaron Addison
aaddison@wustl.edu





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U.S. COMMISSION ON VOLCANIC CAVES

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

Symposium Schedule:

Please see the symposium website for details.

March 16, 2014 (Sunday) – Fly to Baltra Island in the Galapagos, then transfer to Puerto Ayora on Sant Cruz Island. Evening cocktails.

March 17, 2014 (Monday) – Symposium, Conferences, Posters. Dinner.

March 18, 2014 (Tuesday) – Bellavista caving field trip. BBQ on site.

March 19, 2014 (Wednesday) – Pemicias caving field trip. Dinner on site.

March 20, 2014 (Thursday) – Royal Palm caving field trip. Transfer to Isabela Island. Dinner.

March 21, 2014 (Friday) – Field trip visits to the caves of Southeast Sierra Negra, *or* vertical trip to Triple Volcan (see photo p. 11). Dinner.

March 22, 2014 (Saturday) – End of symposium.

Option 1: Early departure to Puerto Ayora

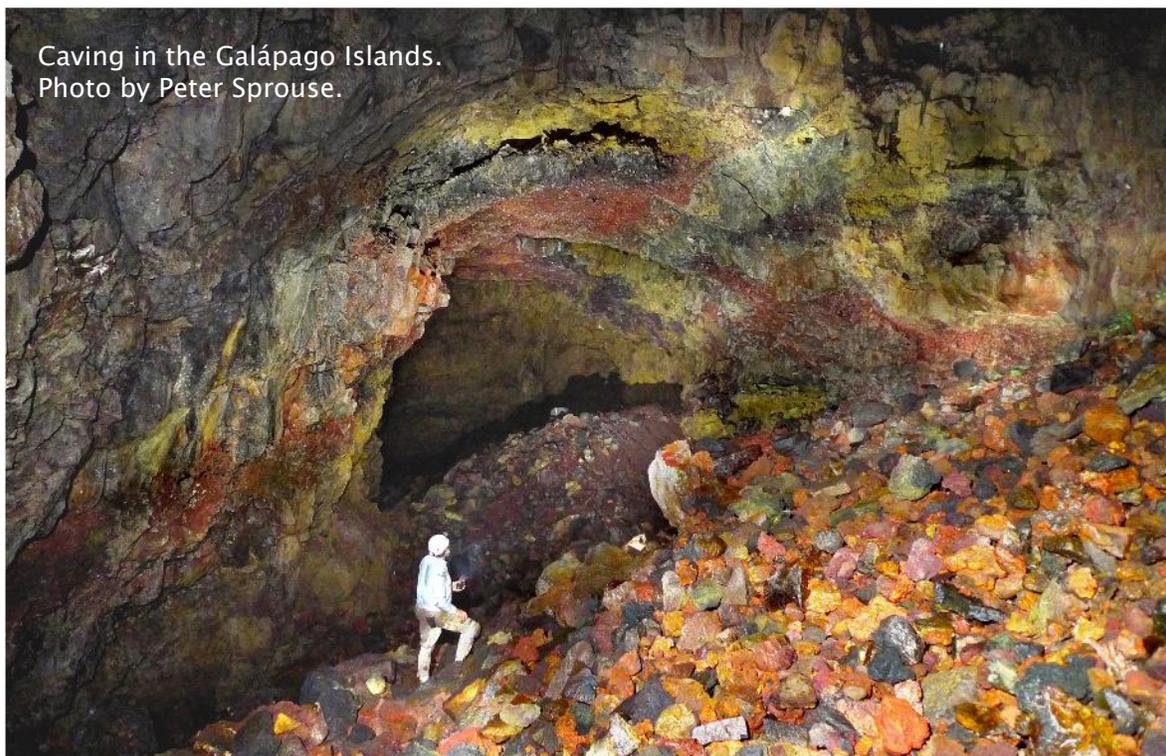
Option 2: Cascajo caving field trip

Option 3: Guided tour to Sulfur mines, new volcanic fields & Volcan Chico

March 23, 2014 (Sunday) –

Option 1: Transfer to Baltra airport

Option 2: Post-symposium cruise.



Caving in the Galápagos Islands.
Photo by Peter Sprouse.



Post-symposium Galapagos Cruise (March 24-28, 2014)

Jorge A. Mahauad is the managing director of Galapagos Tip Top Diving and the Galapagos Tip Top Fleet. He is offering a post-symposium cruises (5 days/4 nights) through the Galapagos Islands on the Tip Top IV yacht that includes trips to various islands, hiking, nature excursions, bird watching, swimming, snorkeling and kayaking.

A MINIMUM OF 16 PEOPLE ARE REQUIRED.

For more information and registration, please contact Jorge Mahauad ASAP:

Jorge A. Mahauad
jorgeantoniomw@gmail.com
jorge@tiptopdiving.com

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www.galapagosrebreathers.com
www.advancedgalapagosdiving.com

March 24, 2014 – Day 1

Flight from mainland Ecuador (Quito or Guayaquil) to Baltra, with AEROGAL Airlines. Your guide conducts you to the bus and after a short 5-kilometer ride to the pier; we board the Yacht without delay. We greet you with our first orientation and we offer a light snack. In the afternoon, we make a panga ride on Black Turtle Cove, series of mangrove-surrounded coves and islets; where we can observe white-tipped sharks, marine turtles, spotted eagle rays, and yellow cow-nosed rays. We board the Yacht for dinner and the first of our nightly orientations.

March 25, 2014 – Day 2

After breakfast, we make a wet landing on Chinese Hat (Sombrero Chino), a small island off the coast of Santiago Island, we can observe on the rocky shoreline: Galapagos penguins, eagle rays, sea lions and marine iguanas. This is an excellent snorkeling site. Optional: time for those who would like to swim, snorkel and/ or Kayak. Return to the Yacht for lunch. In the afternoon, we make a wet landing on Rábida, to walk and to observe marine iguanas and sea lions, pelicans, blue-footed boobies, masked boobies and brown pelicans. We walk and we arrive to a small saltwater lagoon where we can see pink flamingos. Optional: time for those who would like to swim, snorkel and/ or kayak. We return to the Yacht for dinner and our nightly orientation.

March 26, 2014 – Day 3

After breakfast we make a wet landing on Sullivan Bay, a perfect place to get a feel for the volcanic origin of the islands. Optional: time for those who would like to swim and/or snorkel. We return to the boat for a delicious lunch. In the afternoon, we make a dry landing on Bartholomew Island, to hike to the summit; during the hike we observe



Cruise – March 26, 2014 – Day 3 (continued)

colonies of marine iguanas and lava lizards. On the summit we have an impressive view of the surrounding islands, including the eroded tuff cone of Pinnacle Rock. We return to the yacht for dinner and our nightly orientation.

March 27, 2014 – Day 4

After breakfast we make a wet landing on Santa Fe Island to visit the cactus forest and a colony of land iguanas native from Santa Fe. Optional: time for those who would like to swim, snorkel and/or kayak. Return to the Yacht for lunch and sail to South Plaza, where we make a dry landing on the pier of the island, there we can enjoy the antics of the sea lions. A walk through a cactus forest allows us to observe land iguanas and a great many species of tropical birds. At the end of the afternoon, we return to the Yacht for dinner and our nightly orientation.

March 28, 2014 – Day 5

After breakfast we make an early disembark on Las Bachas Beach, a place where we can appreciate a Flamingos lagoon. During all walks, your guide will be explaining details about the lives of the birds and animals. We return to the Yacht for disembarking on the pier at 09:00. Your guide accompanies you on the bus ride directly to the airport.

THESE ITINERARIES ARE SUBJECT TO CHANGE WITHOUT NOTICE, DUE OPERATIONAL REASONS, WEATHER CONDITIONS OR BY THE AUTHORITIES OF THE GALAPAGOS NATIONAL PARK.

<http://www.rwittmer.com/Galapagos-cruises-trips/First-Class-Yacht-cruise-Galapagos-tours&travel/TipTopIV>

Tip Top IV yacht



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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 to Baltra (GPS) include:

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

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

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





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)
- Pre-registration deadline is Dec 15, 2013

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 **optional pre-symposium activities** and the **optional tours** on March 22 are extra and not included in the symposium fee.
4. For the tour of the Sierra Negra volcano (sulphur fields and Volcán Chico), the guide and transportation fees are approximately \$250 and will be split equally amongst the group (i.e., \$25 per person if there are 10 people). There is also a fee of \$15 per person for your horse.
5. For the **optional caving/tour** on March 22 the fee one night's lodging and food on Isabela Island are not included in the symposium fee

Lodging During the Symposium

The following hotels will be used during the symposium:

Hotel España

www.hotelespanagalapagos.com

Hotel Gardner

www.hotelgardnergalapagos.com

Hotel Flamingo and Hotel Red Booby

www.hotelredbooby.com.ec



Aaron Addison descends Triple Volcán
Photo by Peter Sprouse.



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

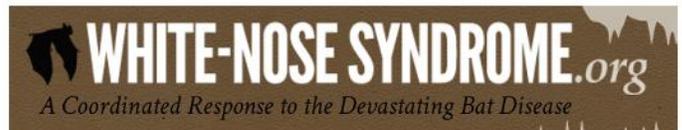
1. The Galápagos caves are warm, 26–28 C (79–82 F)

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!



Hang Doi 1 Km 122, Tan Phu, Vietnam
Photo by Torsten Kohn

Important Lava Tube Caves Found in Dong Nai Province, Southern Vietnam

by Michael Laumanns

In February 2013 a team of speleologists from the German Speleoclub Berlin and members of the Vietnam Academy of Sciences (Institute for Tropical Biology) visited the poorly-known lava tube caves in the Tan Phu area of Dong Nai province in southern Vietnam, about 150 km NE of Ho Chi Minh City. These caves mainly occur along the National Road No. 20 from Bien Hoa to Da Lat. The caves were mentioned by various

authors in the past, including the French Zoologist and Speleologist Louis Deharveng, who released a short article (Deharveng et al. 1995, 2 sketch maps). The caves are formed in extensive basaltic lava streams presumably of Quaternary age. These lava flows were emitted from numerous small volcanic cones in the Tan Phu, Phu Loc and Dinh Quan districts.



Hang Doi 3 Mieng 1 main segment
Photo A. Geist



The 2013 team explored eleven lava tubes with a total of 1.8 km of underground passages. The longest cave found is “Hang Doi 1 Km 122”. This cave has several passages branching and re-connecting, as well as several entrances. The main tube of this cave is 4 m high and 10 m wide. The 437 m long cave is separated by a shallow roof collapse from its southern segment called “Hang Doi 2 Km 122”, which is 112 m long. If regarded as one single cave this tube system would have a total length of 559 meters.

So far the longest lava tube cave known from SE Asia was Gua Lawa II (Indonesia, Java, Gunung Slamet) mapped to 400 m (Anon. 1983). Consequently, Vietnam now hosts the new longest lava tube cave of SE Asia.

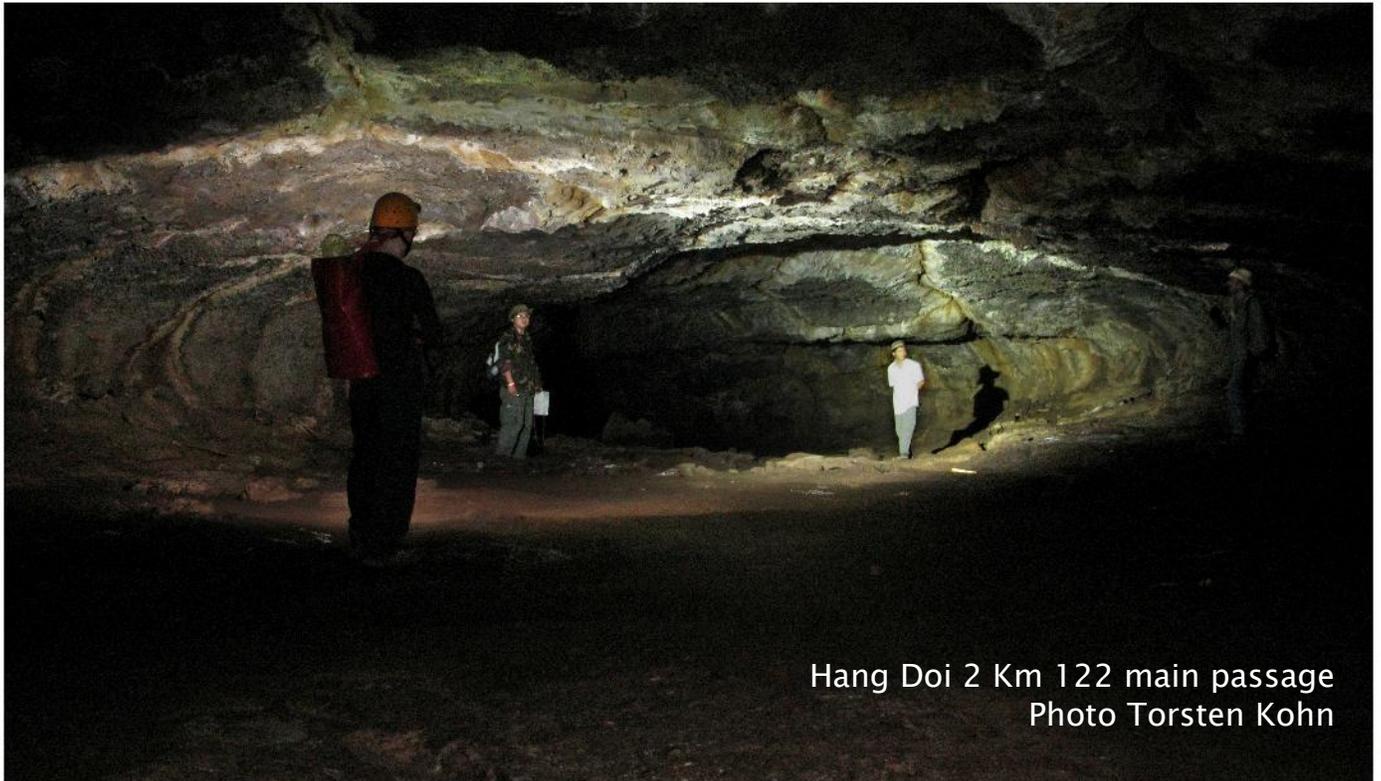
Some of the Tan Phu lava tubes have a very rich cave life. Bats are abundant and form colonies of several thousands of individuals in some caves. Samples of dead bats as well as bat bones were collected for determination. Also various species of spiders, millipedes, centipedes, scorpions, cave crickets, flies and even a weasel-like mammal were observed. There are also many different species of frogs as some of the caves are wet and contain water.

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Hang Doi 2 Km 122 main passage
Photo Torsten Kohn

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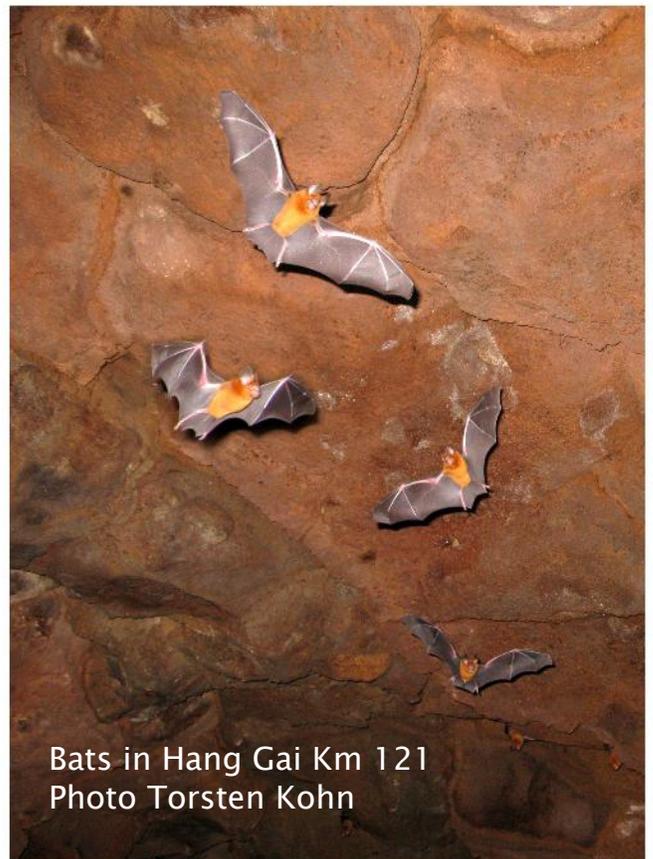
A full report in the English language, including maps and descriptions of the caves, will be published in the speleological publication series of the Speleoclub Berlin:

http://www.speleo-berlin.de/en_publicationen.php

Sources:

Anon. (1983): "De Kleppers". Java-Karst 82. Indonesisch-Flemish Expedition. – Expedition Report, 64 p.; Kraainem.

Deharveng, L.; Troung Quang Tam & Duong Tien Dung (1995): Explorations au centre et au sud du Vietnam. – Spelunca, 59, p. 8-10; Lyon.



Bats in Hang Gai Km 121
Photo Torsten Kohn

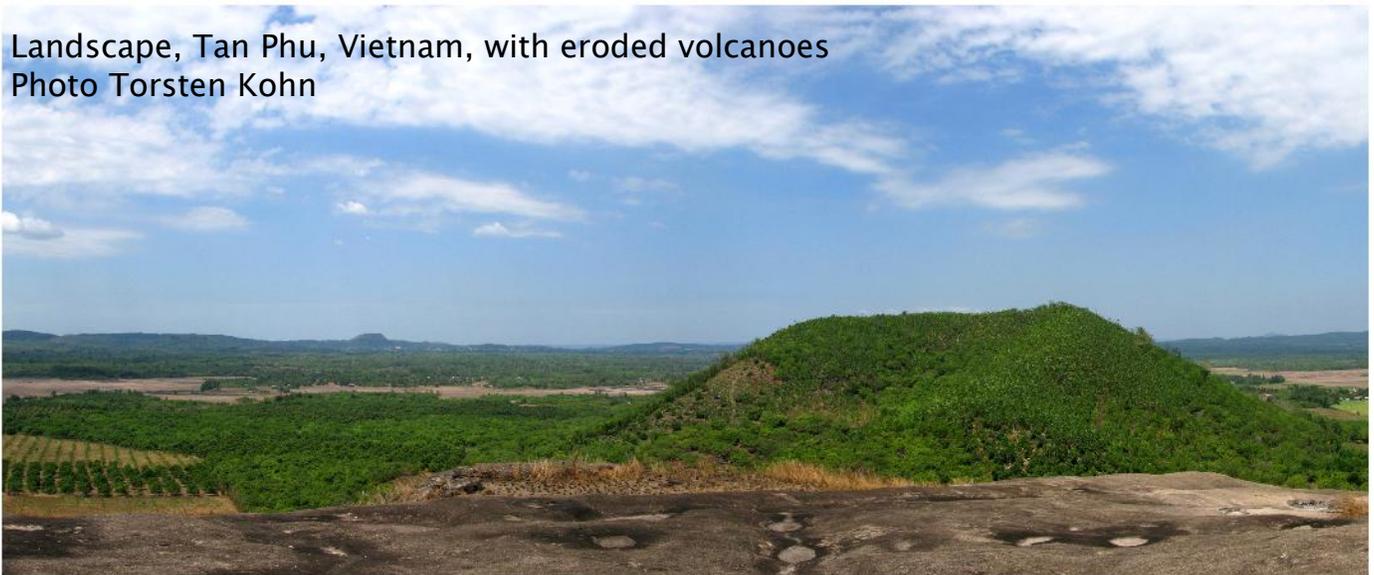


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Hang Gai Km 121 entrance section
Tan Phu, Vietnam. Photo T.Kohn

Landscape, Tan Phu, Vietnam, with eroded volcanoes
Photo Torsten Kohn





A Visit to a Few Lava Caves around Auckland, New Zealand

by John Brush

On a field trip following a recent conference of the Australasian Cave and Karst Management Association (ACKMA), which drew delegates from Malaysia, the United States and Canada as well as from Australia and New Zealand, a lucky few were able to spend two days examining lava tubes in Auckland guided by local lava cave expert, Peter Crossley.

Auckland, with a population of about 1.2 million, is New Zealand's largest city. It is built around two harbours and some 50 volcanoes. Most of the volcanoes were active 24,000 –35,000 years ago,

but the most recent eruption, on nearby Rangitoto Island, was just 600 years ago.

As Auckland grew, many lava tubes were destroyed by quarrying, road works and building construction. Unfortunately, the tubes that remained were often regarded as convenient rubbish dumps or drains. Until recently lava tubes were not officially protected even though some were of deep cultural significance to the local Maori people and others were of significant scientific interest. That some caves now have



Kermes Cave. Photo by John Brush



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Kitenui Cave. Photo by John Brush



Photo by John Brush



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some form of protection or official status is in no small part due to the efforts of Peter Crossley.

Wiri Cave, the first we visited, it is arguably New Zealand's most spectacular lava tube with an intact lining and a pahoehoe floor. It is now a site of special scientific interest and is protected by a heavy metal gate and a restricted-access permit system, but its status was not always so secure. It is surrounded on 3 sides by an old quarry, and on the remaining side, proposed road works once threatened to remove the down-flow end of its 290 metre length.

Closer to the city centre, we visited Landscape Road Cave, which from its backyard entrance extends under ten or so suburban properties. The owners have incorporated the entrance into their

backyard landscaping and have obtained some assistance from the city council to construct steps into the cave, which is sometimes opened up to local school groups.

In a nearby suburb, the entrance to Kitenui Cave is a small manhole cover right beside a neighbourhood street. Just prise the cover open and there is the cave passage a few metres below. If only someone had remembered to bring a ladder. The cave is apparently about 250m long and also extends under a number of properties. It was discovered in 2006 when utility workers broke through while excavating along the street.

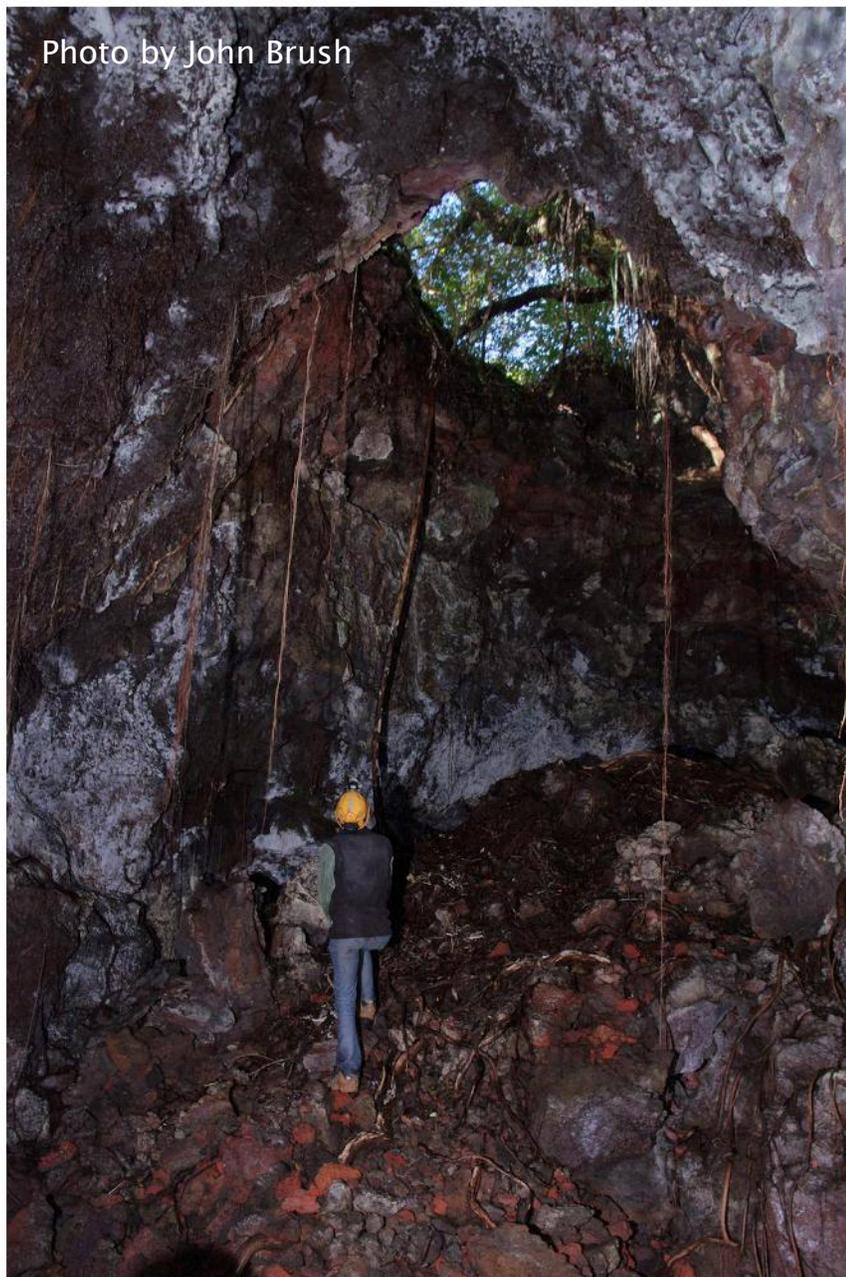
Next morning, a small group caught a ferry for the 15 minute trip to Rangitoto Island on the north side of Auckland Harbour. The island is popular

Wiri Cave. Photo by John Brush





Photo by John Brush



downwards. The is more intact near the down-flow end and has some nice flow lines, levees, benches, lava “tide-marks” and a rough a’a lava floor.

While stumbling around in the bush looking for Kermies, we came across a pit around 5m across and several metres deep. At the bottom there short sections of intact tube on either side of the collapse pit. This cave had not been previously recorded by local cavers, so it is likely more caves remain to be discovered.

The Auckland area has more than 50 significant lava caves and the city could be an ideal location for a future ISV. Perhaps we should twist the arm of Peter Crossley and his colleagues.

with walkers and several lava caves are signposted and have walking tracks leading to (and in some cases) through them. While these have some well-formed lava features, including a lava fall, there are more interesting caves hidden away in thick bush on more remote parts of the island. With a local guide clutching a GPS, these are not too difficult to find. In Kermies Cave, towards the up-flow end, most of the glazed lining has broken away to reveal the brilliant red, yellow and black scorias and lavas through which the lava flow eroded

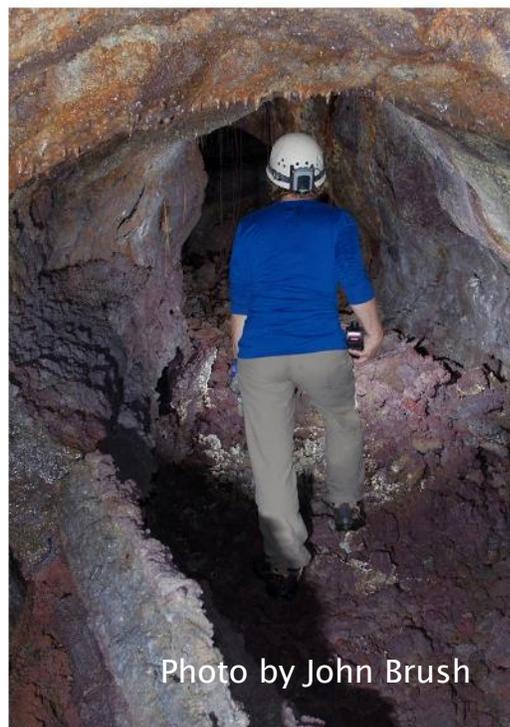


Photo by John Brush

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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

