



INTERNATIONAL SHOW CAVES ASSOCIATION

ISCA Newsletter

January &
February
2021

CONTENTS

Happy New Year!

And happy **International Year of Caves and Karst!**

After one of the most difficult years we remember, the **International Show Caves Association** would like to wish all the best to all the individuals, show caves and institutions who are somehow linked to the subterranean world and its natural wonders. May 2021 give you the opportunity to reach all your personal and professional objectives.

In the following pages, you will find information about some of the most important and exciting events: the **International Year of Caves and Karst 2021** or the **ISCA 9th Congress** and **NCA Convention in 2022**, among other interesting contents.

IYCK 2021

Organized by the **International Union of Speleology (UIS)**, the worldwide organization of cave and karst explorers, scientists, managers, and educators, the International Year of Caves and Karst seeks to explain the influence of caves and karst on the life of people.



ISCA 9TH CONGRESS

Learn more about our next congress. When and where will it take place? What activities and trips are being prepared? Discover the latest news.

NEW ISCA SITE

A brand-new site which shows an updated design as well as all the contents about our association and its members. Information about cave membership, resources and other publications of interest. **Don't forget to send your cave updates as soon as you can!**

Check it out, now!

FOLLOW US!



Share your own articles, pictures, ideas, experiences... and caves! Do not forget to **like our Facebook page!**



Message from the President

by Brad Wuest

Dear ISCA Members,

I hope all of you, your families and co-workers are healthy and safe.

That hope is very present of mind for me now, as I write this article on New Year's Eve from my home office while in isolation. Both my 7-year-old daughter and I have COVID and many of our family members, too, including my mother, and my wife's mother and grandmother. COVID was an unwelcome visitor at our family's Christmas dinner. Fortunately, we are all doing okay so far. I know COVID has become very personal for many of you in our "ISCA family" and my thoughts and prayers are with all of you.



Brad Wuest collecting a bat guano sample for [Into Uncharted Territory](#)

I hope your show caves were able to have as successful a 2020 as possible under the difficult circumstances caused by COVID-19. During the pandemic, ISCA has increased efforts to support our members and the show caves industry on multiple fronts. After the initial wave of show cave closures, ISCA's scientific and technical committee (under the guidance of the committee's Chairman, Dr. Juan José Durán Valsero) published [RECOMMENDATIONS FOR SHOW CAVES IN RELATION TO THE SARS-CoV-2 VIRUS](#). ISCA also gathered and shared COVID-19 [guidelines and recommendations](#) from other well respected tourism industry associations and public health organizations. ISCA then used June 6th, the [International Day of Caves and the Subterranean World](#), to distribute a press release worldwide to create awareness about the importance of caves and the negative impact of COVID-19 on show caves. ISCA also provided members with a template press release where they could fill in the blanks and distribute their own press release in their local areas. Then, in the summer of 2020, ISCA conducted the [international survey](#) to determine three things: the economic significance of the show cave industry, impact of COVID-19 on show caves, our employees, and the economy and finally to identify protocols that show caves are using to keep employees and visitors healthy and safe. The results of the survey were shared with the show cave industry and affiliates worldwide. In addition to all those efforts, ISCA has also greatly increased our social media engagement and communications with these superb newsletters distributed worldwide every other month thanks to the efforts of our Editor, Mr. Juan José Tíscar Moya, aka: Juanjo.

To illuminate the challenges our industry faced in 2020, ISCA distributed a [press release](#) to over 2,850 media worldwide on December 14th announcing the results of our Show Cave's economic significance and COVID-19 impact survey. The press release was sent to ISCA members and affiliates too. You will see a copy of the press release further down in this newsletter. I know some of you translated the press release from English into your own languages for distribution, which is great! I encourage all of you to share the press release with all your affiliates, other industry associations, local government, chambers of commerce, and local media to create awareness and support for your show cave. Please share any news coverage you see or get from this with me and Juanjo so he can re-post. Thanks to all of you who participated in the survey and provided assets for the press release. Efforts like this create more awareness and support for show caves worldwide.

As all of you know, 2021 is the [International Year of Caves & Karst](#) (IYCK) which creates a wonderful opportunity to help the show cave industry rebound in the new year and spread the word about why caves and karst landscapes are important. As we learned from the international show cave study, over 144 million people visit show caves which creates incredible education and awareness opportunities.

My family owns and operates [Natural Bridge Caverns](#) in Texas USA. To celebrate the IYCK, our show cave is organizing special events, festivals, educational opportunities, and other public relations and marketing efforts to create more awareness throughout 2021. We plan to distribute free tickets in various ways such as: ticket trades with media outlets in exchange for advertising, caves and karst trivia on social media, photo contests, and learning projects for schools. We also plan to provide free admissions at various times throughout the year for disadvantaged children who otherwise may not have the opportunity to visit a show cave. We feel efforts like this will create more awareness about the importance of caves and karst in general as well as more awareness and visitation to our show cave.

BRAD WUEST

President/CEO at Natural Bridge Caverns (Texas, USA) and ISCA President. Born in 1972 in New Braunfels (Texas), Brad is married to Lexi and they have four beautiful children: Ashley, Clara, Millie and Harrison.

Contact: bwuest@naturalbridgecaverns.com

Please let us know how your show cave will be celebrating the IYCK and we will share that on Facebook and future newsletters. You will read more about the [International Year of Caves & Karst](#) kicking off further on in the newsletter.

In this newsletter you will also see a draft program for our next Congress including pre- and post-trip opportunities. This will be a unique ISCA Congress because it is being held together with our National Caves Association USA's annual convention. Many show caves in the USA are members of both associations and this creates a special opportunity for a greater attendance and more networking. Of course, it is more work for us hosting the event, but we are really excited and honored! I hope this will ignite your interest in visiting Texas, USA in 2022! We will continue to provide more details, including costs as soon as they are available.

I hope you enjoy this latest issue of the newsletter which is packed full of useful and interesting information thanks to our wonderful editor, Juanjo!

I am pleased to say goodbye to a difficult 2020 and welcome what I hope to be a much better 2021!

Happy New Year, and best wishes for your health, safety, happiness, and prosperity. I think 2021 is a year of hope, recovery, and opportunity.

Please let me know if ISCA or I can do anything to help you.

Sincerely,



Brad Wuest, ISCA President

From the editor: Happy New Year

by Juanjo Tíscar



Forrest Gump Point (Utah, September 2018)

Dear friends, it has been a really difficult year for everyone. I am sure there are many stories to be told, and many of them are not as happy as we would like. However, it is important that we move on and recover the life we once had.

I wouldn't like to spend these lines talking about the pandemic, but there are many things we can learn from it. I really wish you all the best in 2021, and I hope this new year fills you with the happiness, health, job opportunities and professional success you all deserve.

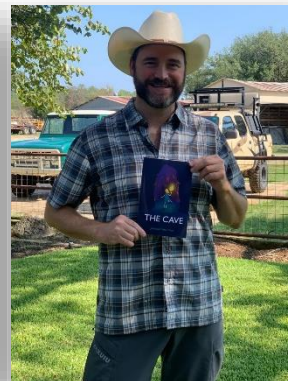
In my case, I wish 2021 brings me much more contents to share with you so we can enjoy ISCA newsletters together.

Oh! Don't forget to write down your objectives for the new year:

- Break a bad habit.
- Learn a new skill.
- Do a good deed.
- Visit a new place.
- Read a book (**Choose mine!**)



ENGLISH VERSION



SPANISH VERSION

If you'd like to read our previous newsletters, visit the links below. Don't forget to visit our website and Facebook page, too! Happy New Year 2021!

DID YOU MISS OUR PREVIOUS NEWSLETTERS?



SEPTEMBER & OCTOBER 2020

NOVEMBER & DECEMBER 2020



INTERNATIONAL SHOW CAVES ASSOCIATION



Find us on:
facebook®



Juan José Tíscar Moya
Contact: juanjotiscar@i-s-c-a.org



International Year of Caves and Karst



Exploring, understanding and protecting summarize the main goal of the International Year of Caves and Karst. Among other objectives, we seek to:

- **Improve** public understanding of how caves and karst touch the daily lives of billions of people
- **Promote** the importance of caves and karst through sustainable development, particularly in water quality and quantity, agriculture, geotourism/ecotourism, and natural/cultural heritage
- **Demonstrate** how the study and proper management of caves and karst is critical to global economic and environmental health
- **Build** worldwide educational capacity through activities targeted on cave and karst science
- **Promote** awareness of the interdisciplinary nature of cave and karst science and management, and emphasize how interactions between different areas of science and management will be needed increasingly in future research, education, and environmental protection
- **Establish** durable partnerships to ensure that these activities, goals and achievements continue in the future beyond the International Year of Caves and Karst.

Note: due to the COVID pandemic, the opening ceremony will be a UIS virtual event on January 26, 2021. The UIS and UNESCO are looking for a date later in 2021 for a celebration of the IYCK at UNESCO Headquarters.

ISCA is pleased to support and be a partner in the **International Year of Caves & Karst 2021!** ISCA feels that caves and karst landscapes are truly deserving of international recognition at this level due to their worldwide significance. We commend the efforts of **UIS** and other partners in this worthy endeavour. We also greatly appreciate UIS's support of ISCA's efforts to establish an International Day of Caves & the Subterranean World.



**Union Internationale
de Spéléologie**



INTERNATIONAL SHOW CAVES ASSOCIATION

ISCA and its worldwide membership of show caves proposes to support the international year by offering free admissions to show caves at various times throughout the International Year of Caves & Karst 2021. Concepts to distribute these free admissions tickets include the following: trading them with media outlets in exchange for promotion, social media, caves and karst trivia, photo contests, learning projects for schools, ticket distributions to school groups and economically challenged families, and traditional methods of marketing and public relations efforts.

Participation will be the choice of each individual show cave. Visitation to show caves is one of the primary ways millions of people worldwide learn about caves and karst every year.

ISCA's efforts will be aimed at increasing education and awareness of caves and karst. Please join us in supporting the International Year of Caves & Karst 2021!



VISIT THE IYCK WEBSITE AND LEARN EVERYTHING ABOUT THE IYCK2021

IYCK2021

SURFACE PHENOMENA
EVENTS

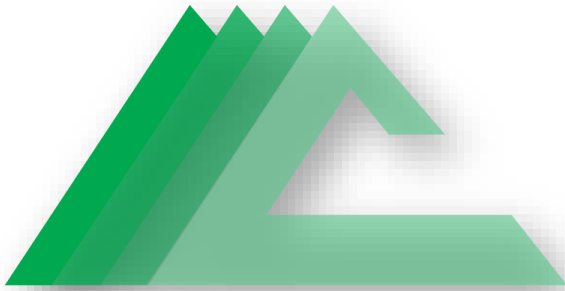
CAVES
KARST HYDROLOGY



Source: IYCK website

2022 ISCA Congress & NCA Convention

by Juanjo Tíscar



INTERNATIONAL SHOW CAVES ASSOCIATION



Hosted by:

**NATURAL BRIDGE
CAVERNS**

Note: Some of the information in this article is subject to possible changes

*Note 2: Mark your calendar because you **CAN'T** miss what is being planned! We want y'all to be here!*

ISCA 9th Congress will take place in 2022, four years after meeting in **Genga-Frasassi (Italy)**, where 46 delegations were welcomed in order to exchange knowledge and discuss topics such as dynamic pricing, science, tourism development, new media and state-of-the-art lighting. This time, the event will be celebrated together with the **National Caves Association Convention**.

WHAT?

2022 ISCA Congress & NCA Convention

WHEN?

September 29 – October 8, 2022

WHERE?

San Antonio, Texas (USA)
Hosted by **Natural Bridge Caverns**



Participants in ISCA's 8th Congress (Genga-Frasassi, Italy, 2018) – By Franziska Oedl

FLIGHTS

San Antonio International Airport

Currently, there are 54 nonstop destinations from and to SA, including the primary U.S. gateways:

San Francisco-SFO	Washington Dulles-IAD
Los Angeles-LAX	Miami-MIA
Chicago O'Hare-ORD	Newark-EWR
Atlanta-ATL	New York-JFK
Dallas/Ft. Worth-DFW	Philadelphia-PHL
Houston Intercontinental-IAH	Detroit-DTW

Since its foundation in 1990, the **International Show Caves Association (ISCA)** has celebrated eight congresses in which its participants have been able to meet, share and learn about many different and interesting topics.

DID YOU KNOW...

So far, the previous ISCA congresses have been held at:

- **1990:** Grotte Di Frasassi, Genga, Italy
- **1994:** Cueva de Nerja, Málaga, Spain
- **1998:** Grotte Is Zuddas, Santadi, Italy
- **2002:** Postojna Cave, Postojna, Slovenia
- **2006:** Crystal Cave & Fantasy Cave, Bermuda
- **2010:** Ice Cave & Cave of Liberty, Liptovský Mikuláš, Slovak Republic
- **2014:** Jenolan Caves, Australia
- **2018:** Grotte Di Frasassi, Genga, Italy

Source: [ISCA](https://www.isca-caves.org/)

TRANSPORTATION



Riverboat



Bus



Scooter



Bike

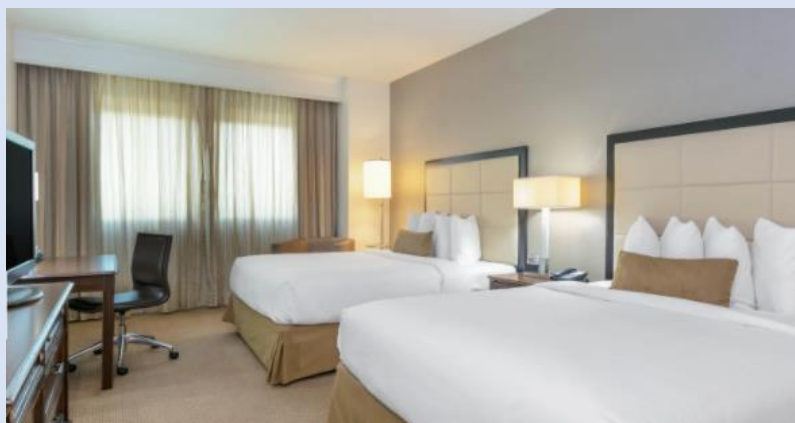
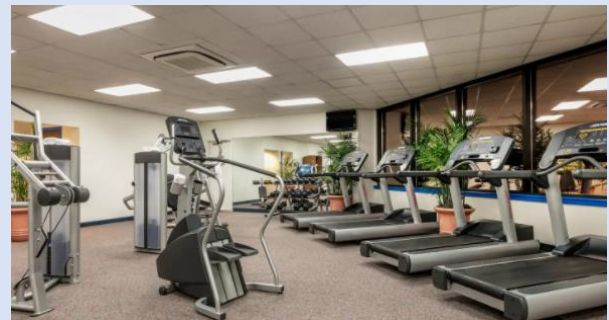
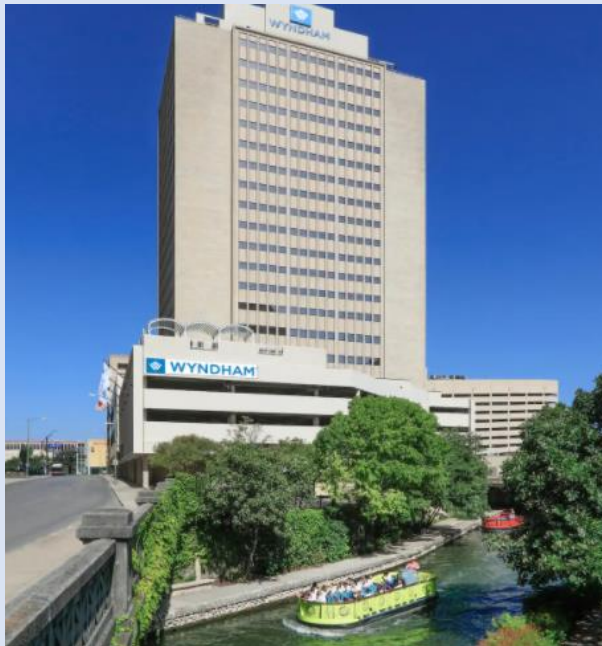


The hotel we will be staying at is next to the San Antonio Riverwalk

HOTEL

We will be staying at:

Wyndham San Antonio River Walk
111 East Pecan Street
San Antonio, Texas 78205
United States of America



PRE-CONVENTION TRIP

DAY 1 (Caverns of Sonora – Texas)



DAY 2 (Carlsbad Caverns – New Mexico)



DAY 3 (Back to San Antonio)



MEETINGS

Sunday, October 2	Monday, October 3	Tuesday, October 4
<p>Board Meetings</p> <p>Committee Meetings</p> <p>Cocktail Reception followed by Buffet Style Dinner</p>	<p>Opening Ceremony</p> <p>ISCA General Assembly #1</p> <p>NCA Business Meeting</p> <p>Around the World</p> <p>Reception & Dinner at the Buckhorn Saloon</p>	<p>Keynote Speaker</p> <p>Industry Presentation</p> <p>Natural Bridge Caverns for Tour, Attractions, & Cocktails</p> <p>Dinner & Music in Gruene</p>

On Tuesday, after the morning meetings:

NATURAL BRIDGE CAVERNS



GRUENE | HISTORIC DISTRICT
AT THE WATER TOWER

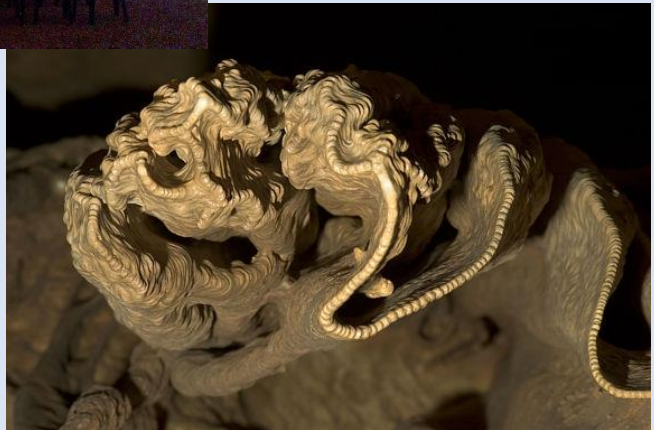
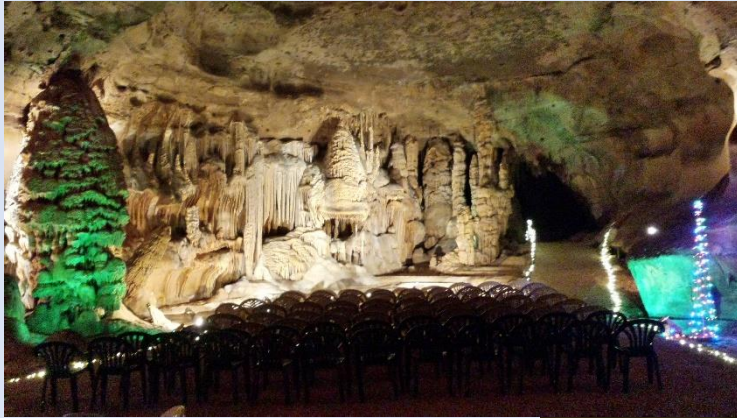


Star Gazing

Wednesday, October 5	Thursday, October 6	Friday, October 7
<p>Industry Presentation</p> <p>ISCA General Assembly #2</p> <p>Alamo Exhibits, Riverwalk, River Cruise</p>	<p>Breakout Sessions</p> <p>Industry Presentation</p> <p>ISCA General Assembly #3</p> <p>NCA Business Meeting</p> <p>Cocktail Reception & Theme Party</p>	<p>ISCA New Board Member Breakfast & Board Meeting</p> <p>Prepare for Post-Convention Trip / Leaving at 3pm</p>

POST-CONVENTION TRIP

DAY 1 (Cave Without a Name – Texas)



DAY 2 (Longhorn Caverns - Inner Space Caverns - Downtown Austin)



2021: 50 Years after the discovery of the Frasassi Caves



CONSORZIO GROTTA DI FRASASSI

Largo Leone XII n.1 60040 GENGA-FRASASSI (Ancona) Italy

A long-standing magic beyond the boundaries of time. As in many adventures, the protagonists are a few brave young men driven by the desire of discovering the world and what lies within its bowels. In their late teens, unaware that their spirit of adventure would earn them a place in history, like those huge white shapes sculpted by Nature, on which they descended from above, like tiny spiders suspended in the empty space.

On 25th September 1971, the young speleologists of the **Cai Group of Ancona** came across the well-known hole on the mountainside along the **Frasassi Gorge**. They dug and broke through the rocks until they reached a wound in the stone overlooking a hundred-meter-deep dark. The immense beauty of the **Frasassi Caves** was sleeping in that black abyss.

The discovery changed their lives forever, in particular the destiny and the matters of a whole territory: the Frasassi area. That historical event will be fifty soon. Half century. 2021 will be a year of celebrations. The **Consorzio Frasassi** and the **Municipal Council of Genga** are already working to plan a series of events to celebrate the unparalleled discovery.

«An important goal – said **Marco Filippini**, Mayor of Genga – fifty years throughout which the Frasassi area and the entire region have become a tourist destination visited by over ten million people coming from all over the world: tourists, students, scientists, journalists, artists and celebrities. A destination which has imposed itself on the national and international scene, contributing to boost the visibility of the Marche region».

«Our engagement is looking at the future of the Frasassi Caves – stated **Lorenzo Burzacca**, Vice president of the Consorzio Frasassi – we will be at the front line in developing a tourist proposal which will play an increasing important role at a regional stage, and will also be the flagship of experiential tourism at a national level. Frasassi has all the characteristics to consolidate its role as an area of excellence. Not only is 2021 a goal for us, but also a starting point to face new and engaging challenges».

The recent and exclusive concert by the tenor **Andrea Bocelli** emphasized the importance of the Frasassi Caves as an appealing scenario and a perfect setting for top-level initiatives. The concert was held in the heart of the underground complex. It was streamed live first, then broadcast on a national channel, Canale 5, on Christmas night. A moving Christmas greeting that echoes the best hopes for a 2021 full of significance for the Frasassi Caves.



WATCH NOW

*Andrea Bocelli at Frasassi Caves
December 2020*

Nuno André Querido Jorge

interviewed by Juanjo Tíscar



Nuno is a true lover of caves

CAVERNER INFO

Full name: Nuno André Querido Jorge

Date and place of birth: December 1st, 1981. Torres Novas (Portugal)

Profession: Grutas de Mira de Aire, SA manager and PR

ISCA: Board of Directors

Hobbies: Gaming, exercising, reading, movies, drawing, listening to music, motorcycles...

Contact: nuno_jorge@hotmail.com

In our last newsletter, **Heros Lobo** (Brazil) chose **Nuno** to be interviewed in January's newsletter. Let's see what our friend (or 'Hermano'-'Brother'), as he says, has got for us:

Q: What are the main challenges and, consequently, solutions that you are finding, to deal with the consequences of the Covid-19 pandemic?

A: I think one of the main challenges is dealing with measures such as travel prohibition and reduced schedules. In order to make the most of this time, we have been training our staff in Health, Safety and Hygiene courses. Previously, they also attended a Geology and First Aid.

Q: What do you expect from 2021 from a tourist perspective?

A: With the announcement of a vaccine and better understanding of the virus, I hope 2021 will bring us some stability with fewer restrictions so tourists will be able to travel and visit us again.

Q: When did you first establish a contact with ISCA?

A: I think it was around 2013 or 2014 that I first met Isabel and Rod Graves from Luray Caverns, they talked with us and invited us to be a part of this global family, we sent the request and on 2015 we came on board, coincidentally, it was around October and there was a meeting in Germany and Austria, and since I was getting married, we attended the Austria part of the meeting and it was a bit like my honeymoon, and at the same time, the first time I met many of my ISCA family.

DID YOU KNOW...

Located in the Iberian Peninsula, Mira de Aire has a wine cellar at a depth of 80 metres, and events such as weddings and concerts are usually held at a depth of 110 metres.

Q: How can ISCA contribute for the global growth of show caves?

A: When we have a global community working with the same mind set, where we are free to share our experience, knowledge, successes and failures, everyone can benefit. Not always what works with one cave will work with others, none the less, we all have the same goal, to preserve and educate the common folk about the many wonders that lay beneath ground.

Q: The next ISCA Congress will take place in Texas, will you be there? What do you expect from the Congress?

A: I hope so. If I can make this trip, it will be my first time in the United States. I would like to be able to visit new caves, learn how other caves operate as well as gather potential new attractions.

Q: You recently collaborated in a study focused on the Portuguese karst ([here](#)). Can you summarize its objectives and mention your contribution?

A: Our part of the study was very small; we just gave our approval for the setting of the weather station, collected and labelled rainwater samples and kept record of the amount of water that had fallen.

Q: You also contributed in a [previous newsletter](#) with a beautiful article about your cave. However, for those who missed it, can you tell us a little bit about its story?

A: The story of **Grutas de Mira de Aire** began when 4 local men decided to enter the cave in search of water. The year was 1947, and many knew of the existence of the cave, however, the natural entrance was through a pit cave and since there were many others with better access, it was never explored before. In winter months, the locals would see steam rising from the ground and since there were textile factories starting to appear, some brave souls decided to enter the earth and look for other sources of water, since during summer, it's a dry region. In 1955, about 8kms from Mira de Aire other caves were discovered and prepared as show caves. The great success of the tours to this cave led to the growing interest in opening the caves in Mira de Aire to the public, but since it was a large and deep cave, the government didn't have the means to undertake the project, so in 1971 public officials put out a call for the inhabitants of the village, all those interested in the possibility of opening the cave to the public, would gather in a meeting at the old Theatre to discuss it and thus the society that runs the show cave was born. During the following 3 years, the cave was prepared to receive tourists until it finally opened on August the 1st 1974. To this day it remains the largest show cave open to the public in Portugal and since the first tour the company has grown into a tourist complex with restaurant, lodging, water park, museum and souvenir stores.

Q: Can you mention any other current project?

A: At the moment we are working on restoring two architectural landmarks of the region that should be turned into small charm hotels and a parcel of land that should receive a set of eco-friendly bungalows.

Q: How many caves have you visited in your life? Which was the last one you visited?

A: I may have visited about 18 caves. The last one was Valporquero (Spain).

Q: Could you mention three caves which left you astonished?

A: That is a very difficult question since I have loved every single tour, all of them were very different and special in their own way and I have had the pleasure and honour of meeting great persons, picking three is a perfect nightmare.

Q: Which is the first place you will be visiting as soon as the pandemic is over? (I know you wanted to come back to Spain!)

A: Good question, I have no idea where to go, once this is over, I'd like to return to La Vall d'Uixó since I lost all the pictures I took there, I also have been wanting to visit Joelle at Isturitz. For some time I've been trying to plan three trips, Iceland, Scotland and Greece for some time, but with my girlfriend we've been talking about the Azores, a return to Madeira and possibly Ireland, so I have a lot of options and no idea where to go next.

Q: Who would you like to be interviewed in our next newsletters? What would you like to ask him/her?

A: Well since I'm addicted to travelling you could interview Hein Gerstner from Mulu Park and ask when there will be a meeting in their caves so we can all go there.

RANKING: TOP-CAVERNERS

1. Heros Lobo – 101 caves
2. Rafael Pagés – 100 caves
3. Juanjo Tíscar – 25 caves
4. Nuno Jorge – 18 caves

How many caves have you visited?
juan jotiscar@i-s-c-a.org and let us know!



COVID-19: ISCA Survey Results

[READ FULL PRESS RELEASE](#)

Frasassi/Genga-Italy (December 10, 2020) — While recent news has been consumed with huge layoffs at large name brand theme parks, little has been said about the scope of loss in smaller entertainment venues that rely on travel and tourism for their livelihood.

One of those industries is represented by the [International Show Caves Association \(ISCA\)](#). Show caves around the world protect and preserve caves and provide a place for people to learn about these special, natural, cultural, and historical resources. There are more than 1600 show cave businesses throughout the world.

ISCA surveyed show caves worldwide and the sampling represented 1/16th of the worlds' show caves. The first goal of the project was to establish a baseline for the significance of the show cave industry worldwide and to educate the world on how show caves contribute to the global economy. The second purpose was to find out to what degree the COVID-19 pandemic has negatively impacted show caves, employees, the economy, and our mission of preservation, conservation, and creating interest in our subterranean world. The third goal was to highlight protocols, the show cave industry implemented to keep employees and visitors healthy and safe.

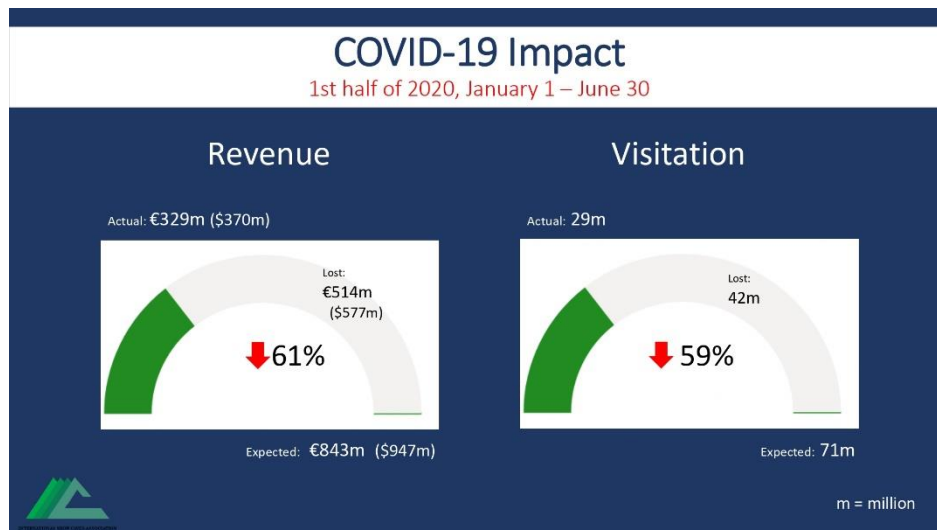
Brad Wuest, President of ISCA and a co-owner, President/CEO of [Natural Bridge Caverns](#), located in [San Antonio, Texas](#) said, "Show caves play an important role in nature tourism and sustainable economic development, providing jobs, and helping the economy. We all know this to be true, but the data had never been collected to quantify the significance of the show cave industry on a worldwide basis, Wuest said. "We hope these results will create more awareness and support for the show cave industry."

[VIDEO: Brad Wuest, ISCA President, announcing the results](#)

International Show Cave Survey
Worldwide Results
Summer 2020

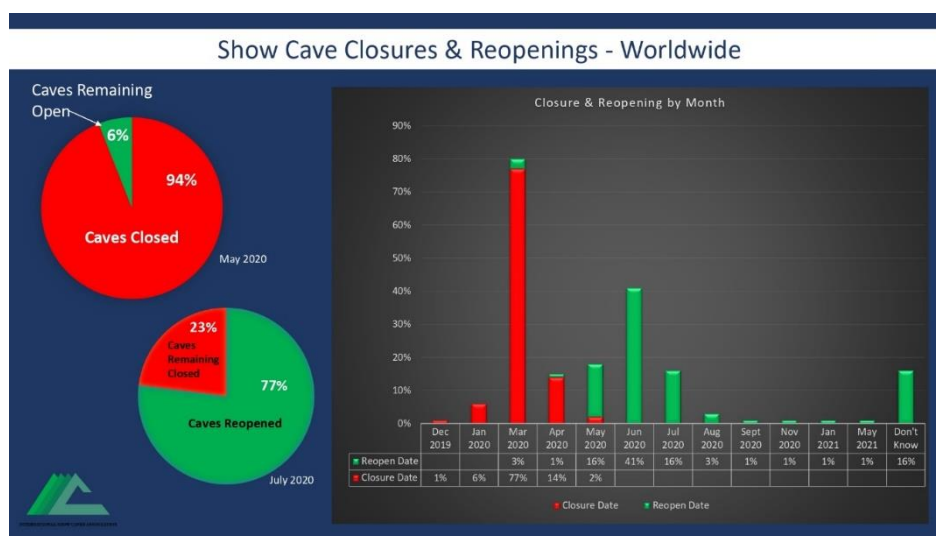


INTERNATIONAL SHOW CAVES ASSOCIATION



COVID-19 impact (ISCA)

On the first goal of identifying the significance of the show caves industry, the data showed that **in 2019, 144 million people visited show caves worldwide generating €1.72 billion (\$1.93 billion) in visitor spending.** The actual economic benefit is likely higher due to multiplier effects. Show cave visitors also stay in hotels, eat at restaurants and shop locally too which helps the economy and quality of life for the entire region including generating tax revenue. During show caves' 2019 peak season, **69,000 people were employed by the industry with a payroll of €699 million (\$786 million).** These numbers suggest that show caves offer a vibrant, important contribution to the economy of the regions where they are located.



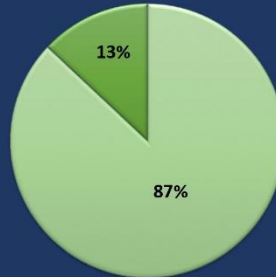
Show cave closures & reopenings worldwide (ISCA)

During the first half of 2020, **94% of show caves worldwide closed due to the COVID-19 pandemic.** COVID-19 closures and operational constraints have caused devastating losses in both revenue and numbers of visitors in comparison to the same time frame in 2019. During the first half of 2020, worldwide, show caves were down €514 million (\$577) million in revenue or 61%. **Visitation is down 42 million people worldwide equating to a staggering 59% in the first half of 2020.** The overall economic impact of these losses is far greater due to multiplier effects.

COVID-19 Impact on School Children (student) Visits

1st half of 2020, January 1 – June 30

School children account for 13% (5.44 million) of the 42 million visitors lost during this time period.



COVID-19 impact on school children visits (ISCA)

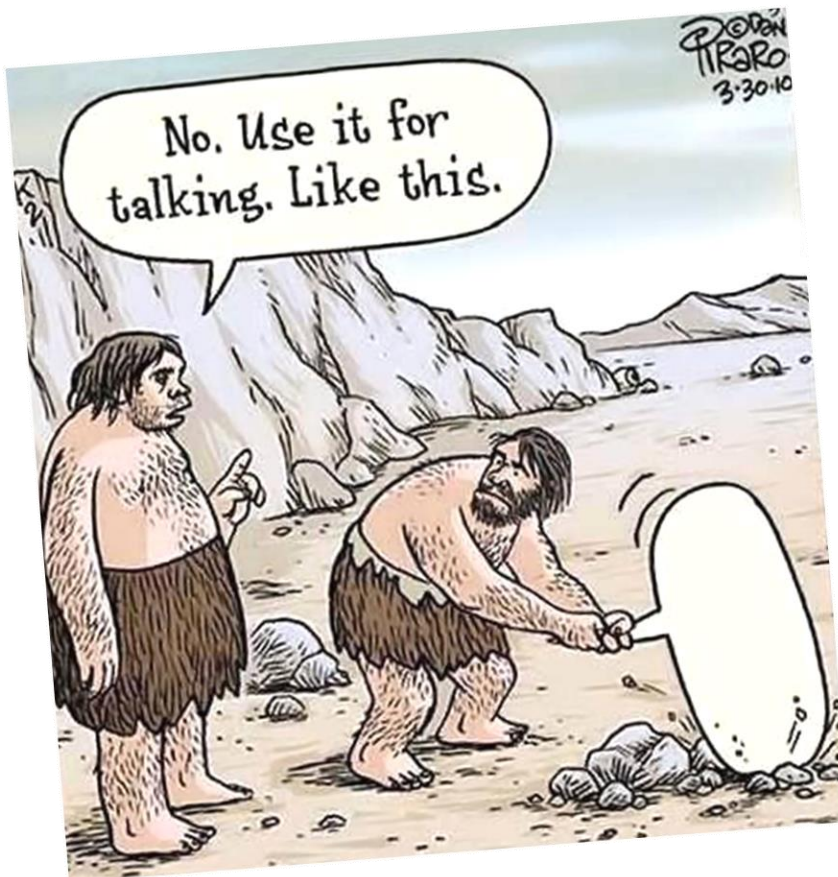
Visitation losses include not only locals and vacation travelers but educational groups too. Show caves hope the **traditional school field trip will not become a thing of the past**. Each year millions of school children visit show caves to learn about geology, hydrology, paleontology, archeology, conservation, and ecology. The educational value of field trips cannot be replaced by in class or remote learning. **School children / students amount to 13% of the visitation loss worldwide or 5.44 million. Until school field trips resume, the loss of this revenue stream will continue to hurt the show cave industry.**

Show Cave Participation Across the World

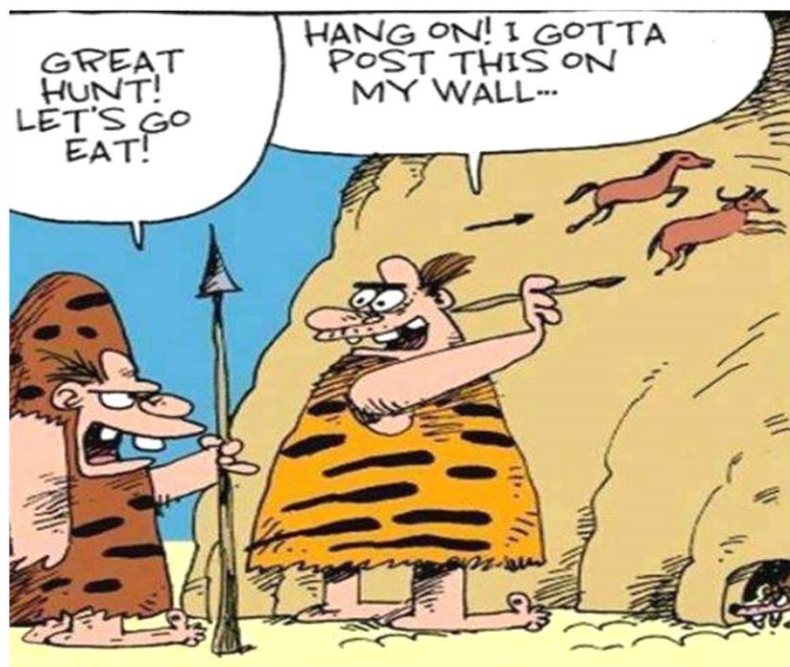


Show cave participation across the world (ISCA)

The funny side of life

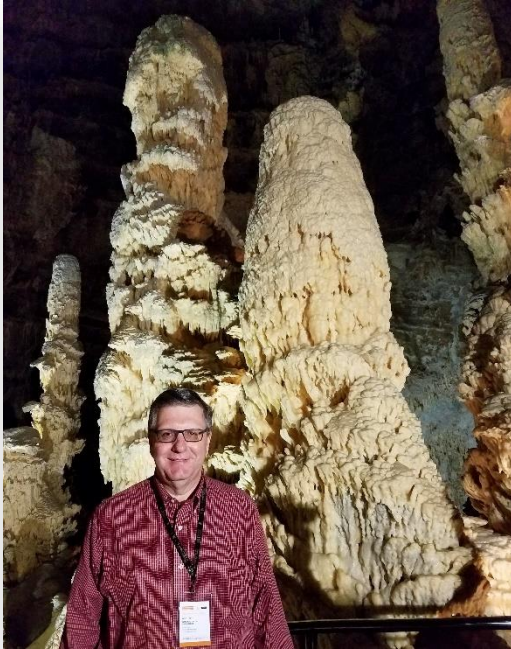


Source: Bizarro Comic



Source: Gimmedistractions

Meet Robert Alan Holt, NCA Executive Director



Bob Holt at Frasassi Caves (Italy)

Bob Holt has been involved in many aspects of tourism for 48 years. He began his career in 1972 as a teenager looking for a job during the summer months. A short drive from his home is world famous Howe Caverns located in upstate New York. He applied to be a tour guide, but back in those days it was very difficult to achieve that position. In the meantime he went to the caverns to interview with the restaurant manager to become a dishwasher. He was hired on the spot. In the meantime the tour guide manager was calling his home to hire him as a tour guide. He washed dishes for two seasons while also working the snack bar counter.

He then trained to become a tour guide working during college years. One summer he guided during the day and evenings he was the front desk clerk at the caverns motel. Sometimes he would work the ticket counter and help in the gift shop. In 1977 he became the manager of the motel and in 1985 the resident property manager. Basically

there isn't one job he hasn't done at the caverns. In the slow season and winter you do everything from answering telephones to selling souvenirs to cleaning and management duties.

Bob left the caverns in 1999 to go to Cooperstown, NY to run a large Best Western Inn and Suites. Cooperstown is the home of baseball and the National Baseball Hall of Fame and Museum. He was fortunate enough to meet many famous players of the sport and some inductees into the Hall of Fame.

His heart was always the cave business. He missed it very much along with the people he worked with for so many years. Howe Caverns was a closed stock corporation. Bob had invested in the company along with 225 other shareholders. When the company came up for sale in 2007, a couple local investors decided to make an offer to purchase all the outstanding stock with the stipulation Bob would return as the caverns' new general manager. The shareholders voted in favor of the sale and Bob returned and a new era began in making numerous improvements above and below ground. A new advertising campaign began with a whole new look with a logo for road signs, brochures, television ads and more. At the time of the sale attendance in cave admissions had dropped considerably and after the first year with the new campaign admissions jumped from 220,000 to nearly 238,000.

During his tenure as general manager at Howe Caverns, Bob began to attend meetings of the [National Caves Association \(NCA\)](#). He knew some of the members as Howe Caverns hosted the 1973 and 1984 conventions. He became an NCA board member, secretary and treasurer. He served as chair of the Insurance Committee. In 2012 he left Howe Caverns. The NCA had received the resignation of the NCA Coordinator. Bob was asked if he would be interested in taking over the role of Coordinator and the board members decided to change the role and title to Executive Director. He immediately expanded the quarterly **Cave Talk** newsletter to a monthly publication. Over the years his function has become even greater with more inter-working relationships with members.

Download NCA's Cave Talk [December 2020](#) & [January 2021](#)



“2020 has been one of my busiest years with the dealing of COVID-19. I formed an ad hoc committee called ‘Restart 2020’ to help our members with the almost daily updates. I issued weekly updates on our members so we knew what everyone else is dealing with. Caves that were closed and when and how they anticipated reopening. About four caves remained closed all year. It certainly has been a time when all members have come together to help each other out. The amazing thing is that once the caves reopened the majority had a fantastic year. Attendance might have been down, however, almost all reported per cap spending was way up especially in gifts and souvenirs,” said Bob. The Association plans to continue the ad hoc committee into the new year as, “Restart 2021.”

Bob reported “2020 was the first time in 54 years that the NCA had to cancel our convention. We planned to be in northern California but that was postponed until the fall of 2021. Instead, we did a virtual two day convention. As nervous as our convention coordinator Susan Berdeaux and I were about this, it came off pretty darn good! I was very pleased we had 173 online attendees! By far better than any in-person meeting we ever had! Everyone agrees, this better be the only virtual meeting, because the NCA family lives for all the hugs and kisses and networking each year.” He also said “the best part of working for the NCA is our members. We are a family and when family has a problem, we take care of them – I thoroughly enjoy working for and assisting our family members.”



Bob Holt with President George H.W. Bush (1999)

During Bob’s career he was involved in local Chamber organizations, Destination Marketing groups and the New York State Hospitality and Tourism Association (NYSHTA). In 1997-1998 he was chairman of the Association and was involved with lobby efforts in both New York State and with the American Hotel & Lodging Association (AHLA) based in Washington, DC. He served on the AHLA board and met many powerful Representatives and Senators in Washington. The AHLA acknowledged Bob in 1999 as a “Most Valuable Volunteer” and an award was presented to him by former U. S. President George H. W. Bush. Bob said “it was an honor and pleasure to meet the president – a true gentlemen who loved to laugh – a time I will never forget as long as I live.”

Like ISCA, both NYSHTA and AHLA belong to the International Hotel & Restaurant Association (IHRA). IHRA would hold a Congress somewhere around the world and Bob for many years attended those meetings. “I was a very fortunate to take part in several IHRA meetings and make friendships from all over the world. The same is true to be said about ISCA.”

“Speaking of ISCA – I attended my very first Congress in 2018 in Italy. As I said I enjoyed meeting new friends here as well. Juanjo asked me how many caves I have seen in the USA. My answer is many – too many to count! He asked me what my favorite ones are – this to remain confidential as not to upset any NCA member! However, after visiting Caves de Frasassi, I told ISCA President, Brad Wuest I now found my new favorite cave! Perhaps some of you heard this story - Brad noticed I was overcome with emotion. I’d never seen anything so beautiful as Frasassi. There was decoration all around me. Brad told Ricardo Strano what had happened to me and the next day Ricardo invited me to lunch at his table. He had invited the Italian press who were doing a story on the Congress and they wanted to add my reaction that came not only from my eyes but the heart,” said Bob, “I received the newspaper the next day – all I could read was my name as I don’t read Italian!

Today Bob continues to serve on the NYSHTA board and in 2019 the Association acknowledged his 30 plus years on the board of directors and they made him an honorary board member.



Bob Holt (5th from the left) Bob with Howe Caverns employees (1973)



Bob Holt, Brad Wuest and Ricardo Strano (ISCA 2018)

Bob has a busy life outside of work. This also helps him to get through the pandemic. He takes an active role in his church serving as cantor on Sunday and at times filling in for the pastor.

He is a charter member of the Schoharie Valley Singers, a community choir performing concerts every May and December for the past 42 years. Due to COVID, the choir has gone virtual releasing their first mini performance on YouTube. You may watch [here!](#) - his gift to you!

A history buff, Bob enjoys genealogy, local history and collects lots of old photographs from years long gone. "If the photos are old and perhaps faded, I restore them to look much newer. My goal is to publish a book of photos and short stories about my hometown one day."

He loves collecting antiques and has several heirlooms handed down to him. One big collection he has is antique Christmas ornaments. He decorates three trees in the house. The main brand is "Shiny Brite" and they are a reminder of his childhood.

Although Bob lives in rural upstate New York, he travels often to the southwest and the state of New Mexico. He loves the warmer and dry climate and hopes to return for a visit in the spring of 2021. This will be the first thing he does once the coast is clear to travel and not have to quarantine.

Bob loves tourism and the cave business. In 2022 he will celebrate his 50th anniversary working in the tourism industry. "I hope you all will celebrate with me when we attend the 9th ISCA Congress in San Antonio, Texas USA," says Bob.



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Singin' in the Cave

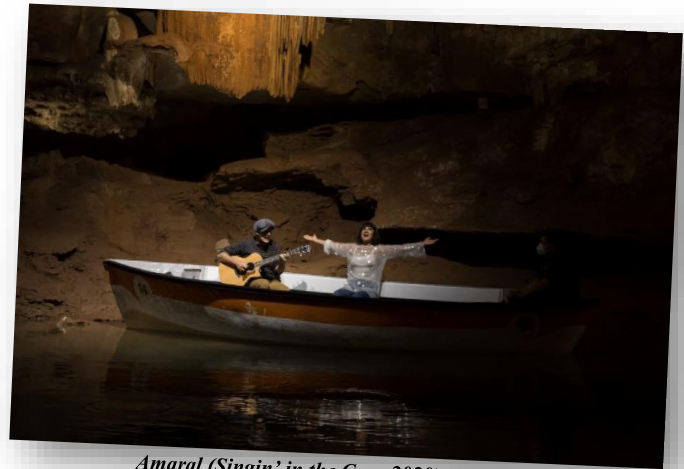
with the collaboration of Raúl Rubio (**luzazul estudio**)

A boat and a world shaped by nature. Stalactites and stalagmites being the focus of attention at **Coves de Sant Josep**.

Peace. Silence. Beauty.

You think it is the end of the visit and then, a sound reaches you. It is not the dripping of water in Europe's longest subterranean navigable river. It is music. Guitar, piano, trumpet, flute...

As an invisible Pied Piper from Hamelin, it guides you towards an unforgettable experience.



Amaral (Singin' in the Cave 2020)

No microphone. No amplification. Only the singular acoustics at the Chamber of the Bats.

A perfect union among sound, water and rocks. You are getting closer. Your hair stands. Sensibility at its most level. You are somewhere else, a world where you would stay forever.

Singin' in the Cave is a cultural project which projects the heritage of **Coves de Sant Josep** and the touching art of music. Together, they are even more beautiful and they create a memorable experience. A moment which you will never forget.

After five editions and more than 49 concerts, it has been proved that Singin' in the Cave is different from other shows, and it is worth being experienced at least once in a lifetime. The collaboration between Coves de Sant Josep and **luzazul** (the creators of the show) works perfectly. These private shows offer no more than 50 places. A privilege for the lovers of historical heritage, music and life.

Singin' in the Cave has made it possible to enjoy the music of great artists from Spain, Italy, Portugal, Norway, the United Kingdom and the USA, among others.

"The best place to enjoy the best music", "it can only take place here", "an absolute privilege", "music cherishing your senses" and "it is really difficult to describe something as beauty as Singin' in the Cave" are some of the general opinions shared by those performing in such a place like **Coves de Sant Josep**.



*Juan Perro
(Singin' in the
Cave 2019)*



Singin' in the Cave
Youtube channel



Maika Makovski (left) , Raquel Lúa (below)...



Annie B Sweet (above), June's Kaleidoscope (right)...



Into Uncharted Territory

text by C. William “Bill” Steele

images by Bennett Lee

Article by *The Explorers Journal*

Had the spring field season gone according to plan, I would have been heading back down to southern Mexico with my fellow cavers to continue our push ever deeper into Sistema Huautla, which, at 1,560 meters, is the deepest cave system in the Western Hemisphere. Since 1980, I have led more than a dozen Explorers Club flag expeditions into Huautla. This year, I was to have been joined by a team of 27 of the world’s top speleologists and scientists from five countries. With the coming of the Covid-19 pandemic, however, we were forced to scrap our April-May expedition two weeks prior to departure.



The group of adventurers (Taken by Bennett Lee)

With my international travel feathers temporarily clipped, and not one to sit idly by, I decided to turn my proverbial headlamp back onto speleological treasures closer to home—in this case, a world-class “show cave” known as **Natural Bridge Caverns (NBC)** on the outskirts of San Antonio, where last summer we discovered some 500 meters of previously unknown passageways. These are the first to be found since the Texas Hill Country cave was designated a National Natural Landmark in 1971, and, it is funny to think, they might never have been found had it not been for chance discussion with fellow caver and a friend of many years, Orion Knox, during an outing of the Texas Chapter of The Explorers Club in October 2018.

I had been invited to present the latest findings from Sistema Huautla at a lecture-dinner, which was to be held in Longhorn Cavern State Park, an hour and a half northwest of Austin. In addition to touring the Longhorn caves before dinner, I suggested to the event organizers that our members might enjoy a full day of caving if we included an optional midday trip to NBC, a 90-minute drive away. If so, I would be delighted to see if we might be led through the caverns by none other than Orion Knox, who, along with three fellow St. Mary’s University students—Preston Knodell, Al Brandt, and Joe Cantu—discovered NBC in March of 1960. (In a “normal” year, the caves, which were opened to the public in the summer of 1964, attract nearly a half-million visitors.) Orion graciously agreed and a tour was arranged.

Upon our return to the visitor center after the excellent tour, my partner Diana Tomchick spied a map of the cave on the wall and gleefully asked Orion if there were any remaining passages to be explored. With a slight smile, he pointed to a place on the map marked the “Dome Pit,” which, at 30 meters in height, was one of the tallest chambers in the cave. Orion suspected that there may be a passage near its ceiling but, when it was surveyed back in the 1960s, the cavers’ carbide lamps were not bright enough to see if there was a passage leading off from the top of the dome. He also explained that the limestone walls of the chamber were soft in places, making it difficult, if not impossible, to climb. My curiosity piqued, I smiled at Diana. Without saying a word, we knew it probably could be climbed by someone with the right skill set.



Into uncharted territory (Taken by Bennett Lee)

In the months following our visit, Orion put me in touch with Brad and Travis Wuest, third-generation owners of the caverns, which are located on private property, and we were able to arrange a trip to check out the Dome Pit firsthand.

In February 2019, Diana and I returned to NBC, armed with our powerful Scurion headlamps, which were sure to provide far better illumination than had been used in the cave before.

We met up with the Wuest brothers and two of their NBC guides and surveyors, Justin Royce and Dillon

Ellis, and set off for the Dome Pit. Passing beyond the exit tunnel that marked the end of the paved tourist trail within the cave, we went over a handrail, down a flight of concrete steps, and into a suite of undeveloped passageways and chambers, including a massive one known as the Inferno Room, which is filled with blocks of rock and dangling speleothems. Within minutes we found ourselves squeezing, climbing slippery muddy slopes, stoop-walking, belly crawling, and working our way through constrictions, which necessitated contortionist moves. An hour and a half later, we reached the Dome Pit—a sheer drop into an enormous chamber. A rolled-up cable ladder was rigged, and each of us was belayed down to its base.

The light-colored limestone walls of the Dome Pit towered more than 30 meters to a flat ceiling. Our bright Scurion headlamps lit up the chamber and it appeared that indeed there was a large passage at the top, which could be reached by a skilled cave wall climber. I had just the right guy in mind—Lee White, who had been a key member of our Sistema Huautla team since 2017.

Eager to explore uncharted chambers in the cave on their own property, the Wuest brothers expressed interest in our relatively high-tech gear and asked lots of questions as they would need to be better equipped and better trained if they were to be part of our exploratory team pushing deeper into the cave system. I told them not only about our Scurion headlamps, but also about Gonzo Guano Gear and our frog vertical climbing system; CaveSkinz pants and jackets; and, lastly, shared a favorite gear source, On Rope 1, for the right kind of pack, etc. They kept notes.

Based on this new information, we made a plan to return to the Dome Pit with Lee White in early May, once we had concluded our spring Huautla expedition. While we were in Mexico, I got an email from the Wuest brothers who said they had returned to the Dome Pit with a drone operator who flew his drone up to the ceiling and into the passage at the top. They said there were large stalagmites and it looked good.

As planned, Lee and I made our way to NBC and into the Dome Pit in early May. We soon realized that climbing it was a bigger deal than we envisioned. We were also aware that the unexplored passageway had the potential to lead to exciting new cave chambers.

After an early morning planning session on May 8, our group of 20, including a video



Cave formations (Taken by Bennett Lee)

team and a drone team, entered the cave. Upon arriving at the Dome Pit, Lee immediately scanned the walls with his bright headlamp and eyeballed his route. He chose to go directly up the left wall to the passage above. There was a ledge that could easily be reached about 5 meters up where he planned to place his first bolt. With me belaying him, he would carry the end of a static caving rope with him that would be fed out as he climbed.

Two drones buzzed around Lee, shooting video and still photos as he steadily drilled and hammered bolts during his ascent. In an hour and a half, he was at the top, and shouted to us down below, "It goes!"

Lee pulled up the belay rope, rigged the static rope, and rappelled back down, removing the hangers as he did. Then six of us (the Wuest brothers, Lee White, Bennett Lee, Justin Royce, and I) climbed the rope one at a time and went off into virgin cave passage.

The passage was a canyon consistently 5 to 6 meters tall and 2 to 3 meters wide. The ancient mud on the floor stuck to our boots and caused them to become heavy. Nearly 200 meters in, we came to a pit in the floor and the passage continued beyond it. By the time we wrapped up this first foray and exited the cave it was 1:30 in the morning.

While we were in the passages, the Wuest brothers collected samples of bat guano to date the bat activity in these passages. One guano sample dated to 7,500 years and a second to 6,400 years ago. These dates match archeological dates of a known collapse at the entrance, at which time access by bats was likely blocked. A third guano sample taken in the main show cave reveals bat activity as far back as 15,000 years ago. Formation of the cave system began some 10 million years ago.

The following month, while I was continuing to survey and map new passages in Mammoth Cave, the longest known cave in the world, the Wuest brothers went back to the Dome Pit passage and continued to push deeper into the upper level canyon, which went about 100 meters farther, before terminating in a "T" intersection that ended both to the left and the right. To the left it dropped down into a room, but there was no way to continue out of it.

Brad also descended the pit in the floor of the passage, which turned out to be around 30 meters in depth. It dropped into a nice-sized passage with rimstone dams, pools of crystal-clear water, and large stalagmites. Given the pristine and non-muddy nature of the pit, future exploration will require a clean change of clothes and shoes, with muddy clothes, boots, and climbing rig to be left at the base of the rope. It was clear that the passage opened up with impressive formations much like the ones for which the show part of the cave is known.

On July 27, Diana and I returned to NBC along with two cave mappers—Andrea Croskrey and David Ochel from Austin. We teamed up with the Wuest brothers and other fellow cavers, including NBC staff geologist Brian Vauter, to carry out a proper survey of the newfound passageways. In addition to mapping and photographing what had already been explored, we would lay the groundwork for a 3D-LIDAR scanning team, which would be coming in later.

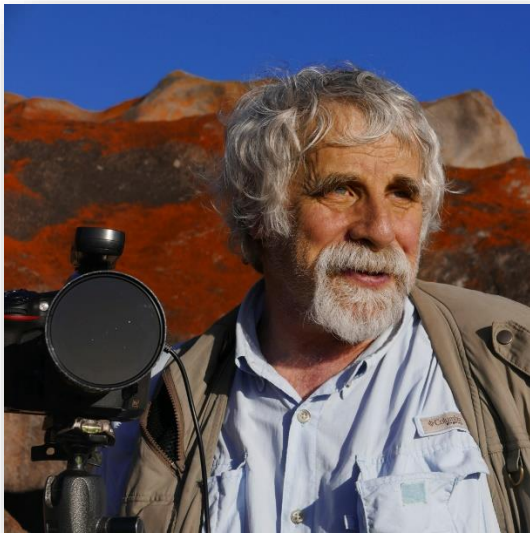
Having entered the cave at 10:30 a.m., we emerged starving and exhausted some 18 hours later. Fortunately, food and beverages awaited us back at the garage by the visitor center, where we washed off our gear and told tales until daybreak.

Since that mapping mission, we have returned to the cave several times with plans to continue our push into the system later this fall with more than 600 meters of new cave passages having been explored and mapped since our initial entry in 2019. And our excitement continues to build about NBC's potential, tempered only by the sudden loss of Lee White. In September 2019, the best cave wall climber in the world was tragically killed in a car crash at age 31. We plan to carry on his unbridled spirit as we continue to explore one of Earth's great geological wonders.

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CONTENTS**



Philippe Crochet: a passionate of caves



Philippe Crochet

PERSONAL INFORMATION

Full name: Philippe CROCHET
Date of birth: September 11th, 1954
Profession: Hydrogeologist (ret.)
Hobbies: Caving and photography
[Website](#)

Q: What is your favourite thing about going into the darkness of a cave?

A: Photography, of course! I was already very interested in photography when I was a teenager. So, becoming a specialist of underground photography was for me the obvious path to take in order to share my **passion** and to show the beauty of caves to a wide public. I'd like to point out that I am not a professional photographer and that I am only driven by passion. Our motto is: "**No caving without photo, no photo without Annie, no Annie without backlight**"! That sums up our passion.

Q: How and when did your relation with caves begin?

A: I started at the age of 16 when I joined a local caving club in **Blois** which was looking for people for exploration and also expeditions. That is how I took part in two expeditions to Morocco (Kef Toghobeit Cave) in 1971 and 1972. Moreover, being close to underground water led to my study of **hydrogeology** at university, which was then followed by a PhD. I started a career of hydrogeologist as a civil engineer. I met **Annie Guiraud**, my wife, in 1980 and she shared my passion about caves and mineral landscapes (deserts and volcanoes). She is both an assistant and a model, and we work together on books, articles and audio-visual programs for which she writes the texts. Her red-clad silhouette which appears on almost all the photos has become some sort of trade mark of mine.



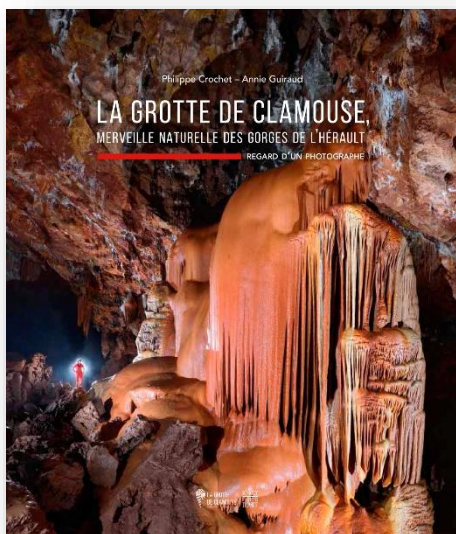
Annie Guiraud, his wife

Q: What do you expect from 2021?

A: First that the pandemic will be over of course. Then, as a result, all our projects which were cancelled in 2020 will be possible again. We had planned a caving expedition in **Turkmenistan**, then a trip to **West Virginia** (USA), where we would have attended the annual caving convention and made some caving trips with friends, and finally, we had planned to attend the 6th ICPM (**International Cave Photographers Meeting**) in **Lebanon**. We love that country and its people and we were looking forward to that event, so we do hope it will be possible again in the future. And 2021 is the year of the **UIS Congress** in France (**Chambéry**), and there is no doubt that will be a great event.

Q: You are a collaborator in **Spelunca, the FFS's national magazine**. Can you tell us about it?

A: I have been in charge of several sections of **Spelunca** since 2014, all in relation with photography. The first one is a four-page portfolio about a foreign cave photographer. The aim is to show **French readers**, who tend to be too self-centered, that there are many nice caves and talented photographers everywhere in the world. The second one is called "Galerie critique". It's the critic from a technical point of view of a photo submitted by a reader. The goal is to encourage people to take pictures in caves and give them some tips that can improve the photo considerably. Besides, there are a series of articles about show caves which have a "wild" part that can be visited by cavers. Clamouse, Cabrespine and Grottes de Han (Belgium) have been the first ones, and there are many others to come. For each article, we take several trips to the cave in order to make a complete photographic report on both the touristic and wild parts and we leave all the photos to the cave manager that he can use as he wishes. We don't limit ourselves to French caves. Finally, in each issue, there is also one page dedicated to a French photographer.



Clamouse, merveille naturelle des gorges de l'Hérault

Q: Any other projects?

A: We have already made two photo books about show caves in 2017 and 2020 ("*Clamouse, merveille naturelle des gorges de l'Hérault*", and "*Les Grottes de Han. Epopée d'une rivière souterraine, la Lesse*"). These two books have the same size and the same lay out, so we hope they will start a whole series. For the time being, the pandemic has slowed down this project.

We are also working on a big photo book that will include the best of our cave images made during the last decade. We hope to publish it for the 2021 UIS Congress.

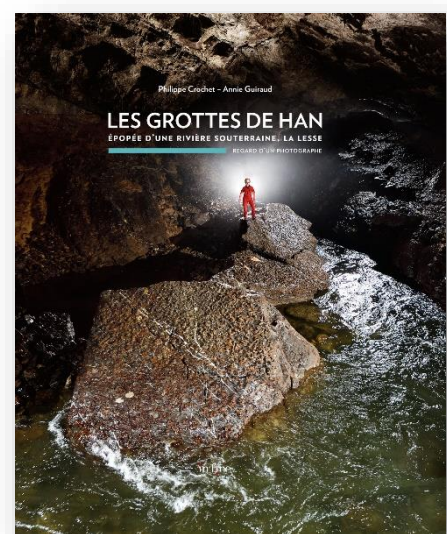
In addition, we regularly make **slide shows** that we present at **film festivals and congresses**, and our great project is the **2021 UIS Congress**, since we are part of the organizing team.

Q: Could you mention the most amazing cave you have ever visited?

A: It's a very difficult question, since we are happy in *any* cave, whether it is ordinary or exceptional. But one of our most memorable experiences was **3N Cave in Iran**. Not only because it's a **salt cave**, with very unusual and gorgeous underground landscapes, but also because getting to know Iranian cavers has been very special to us.

And another country which we really loved was Brazil. We took two trips there as part of the project "**Luzes na Escuridão**" organized by **Leda Zogbi**, a Brazilian caver. She gathered a group of international cave photographers to take pictures of the most beautiful caves of the country, in order to make a book (the 1st volume was published in 2017, the second one will be out in 2021). Generally speaking, a cave is always associated with the context, that is to say the country and of course the people we meet and with whom we share lots of unique moments.

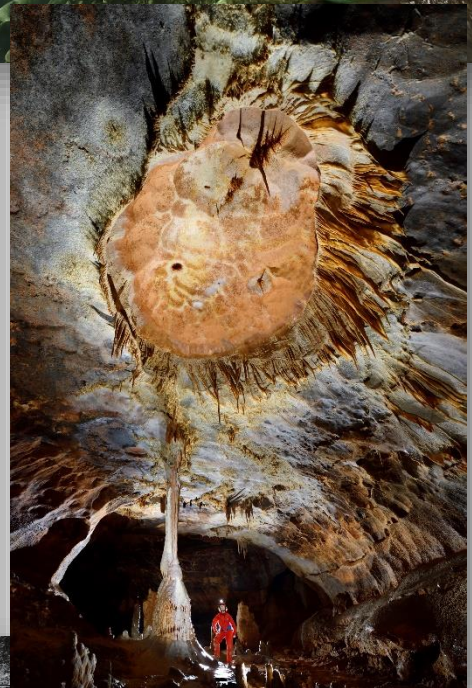
The other great events that we never miss are the **International Cave Photographers Meetings** (2011 in France, 2013 in Italy, 2015 in Turkey, 2018 in the US and 2019 in Japan). Cave photographers from around the world are like a big family. We share a week of caving trips, good food and friendship and we learn a lot from each other. Moreover, this gives us the opportunity to visit caves that are protected and have a limited access.



Han. Epopée d'une rivière souterraine, la Lesse

Q: What is the first place you would like to visit after the pandemic?

A: Well, all the places that we could not go to in 2020 (Turkmenistan, West Virginia and Lebanon). Then, everything is open. We are usually invited by cavers from different countries around the **world**. They make it possible for us to see some of their most **beautiful caves** so that we can take photos of them. In return, we give them all our photos that they can use as they wish. It's a **friendly cooperation** without any financial considerations. And that gives us the opportunity to meet outstanding people and travel all over the world.



[Philippe Crochet's website](#)



Linking the karst record to atmospheric, precipitation, and vegetation dynamics in Portugal

Abstract: Cave deposits can be valuable sources of paleoclimate data, especially when atmospheric circulation patterns, precipitation variability, vegetation changes, and the chemical evolution of waters moving through the karst environment can be mechanistically linked to speleothem proxies. In particular, an evaluation of the factors that control the isotopic composition of precipitation and the evolution of rainwater during migration from the land surface to the cave are needed to robustly develop speleothems as hydroclimate-sensitive proxies. One area in which precipitation and atmospheric variability are closely linked is western Iberia, where rainfall is strongly influenced by the Azores High, part of the North Atlantic Oscillation (NAO) dipole. Therefore, in order to better characterize the factors that influence the isotopic composition of precipitation in Portugal and to evaluate the potential of using stalagmites from this region as hydroclimate (and NAO-sensitive) proxies, we investigated Global Network of Isotopes in Precipitation (GNIP) data from ten mainland Portugal sites spanning multiple decades. In addition, we use more than one hydrologic year of precipitation amount and isotope data from Buraca Gloriosa (BG), a cave in western Portugal, the site of on-going speleothem analyses, as well as six years of environmental monitoring from BG. We present an integrated analysis of rainfall and vegetation through the normalized difference vegetation index (NDVI) following extremely wet and dry winters. Summer vegetation density, related to the amount of precipitation in the preceding winter wet season, as well as prior calcite precipitation (PCP), would largely control the stable carbon isotopic signature ($\delta^{13}\text{C}$) in stalagmites at BG. Cool season recharge is likely the dominant factor for the oxygen isotopic composition ($\delta^{18}\text{O}$) of water percolating through the cave system, while amount effects exert the primary control on precipitation $\delta^{18}\text{O}$ values. Based on HYSPLIT modeling, moisture sources overwhelmingly originate from the Atlantic Ocean as opposed to the Mediterranean or elsewhere; thus, variability in $\delta^{18}\text{O}$ values in the precipitation (and, thus, by inference, those of the dripwater and stalagmites) are primarily reflecting changes in precipitation amount and not changing temperatures or source regions. Together these data constitute an important analysis of the controls of isotope proxies in Portuguese cave systems.



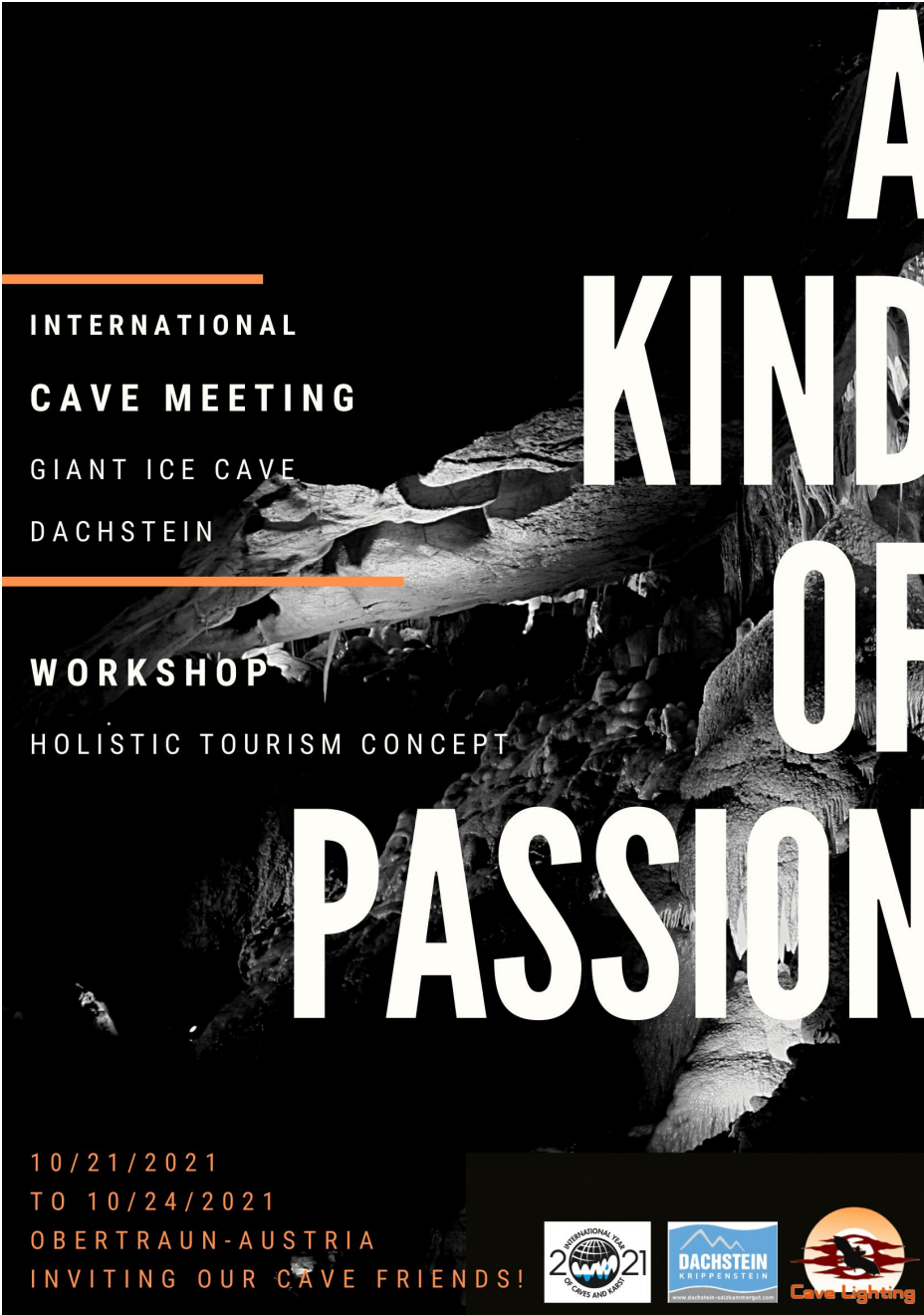
READ THE FULL ARTICLE (Note: Free download ends January 13th, 2021)

Source:

Diana L. Thatcher, Alan D. Wanamaker, Rhawn F. Denniston, Caroline C. Ummenhofer, Frederico T. Regala, Nuno Jorge, Jonathan Haws, Alaina Chormann, David P. Gillikin, *Linking the karst record to atmospheric, precipitation, and vegetation dynamics in Portugal*, Chemical Geology, Volume 558, 2020, 119949, ISSN 0009-2541, <https://doi.org/10.1016/j.chemgeo.2020.119949>.
(<http://www.sciencedirect.com/science/article/pii/S0009254120304885>)

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by Juanjo Tíscar






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CONGRESS
BRASIL 2021**



48th IAH Congress
BRUSSELS BELGIUM 2021
Inspiring Groundwater

What caves are these?



CAVE #5

Hint 1:

They were discovered in 1895.

Hint 2:

There's a museum of flutes made with vulture wing bones.

CAVE #6

Hint #1:

The cave was discovered 20 years before the American Civil War.

Hint #2:

It's been mentioned in this newsletter!



SEND YOUR ANSWERS

CONGRATULATIONS to SABINE ROSALES
([Lake Shasta Caverns](#)) who sent the correct answers!

Cave #3 was Capricorn Caves (Australia)

Cave #4 was Jenolan Caves (Australia)

You can send your answers, too!

Contact: juanjotiscar@i-s-c-a.org



NCKRI: News and announcements

by George Veni



▪ International Year of Caves and Karst: Opening Ceremony!

The International Union of Speleology (UIS) has the high honor of being invited to hold the opening ceremony of the International Year of Caves and Karst (IYCK) at UNESCO Headquarters in Paris. Caves have never had such a high international stage to teach the world about their importance! Unfortunately, because of the continuing COVID pandemic, the opening will now be a UIS virtual event on the same day, 26 January 2021. The UIS and UNESCO are looking for a date later in 2021 for a celebration of the IYCK at UNESCO Headquarters.

At this time, the details about the virtual opening are being finalized, Visit the IYCK website (www.iyck2021.org) for updates and to see how you can help by being part of this global education campaign. Everyone is welcome and encouraged. No program or activity is too small. We are trying to reach the world and need your help. Please visit the Download page for the Planning Guide and other materials you are free to use, and contact me if you have any questions (gveni@nckri.org).

▪ Call for Proposals: Fort Stanton Cave, New Mexico, USA

Caving Community,

It's that time of the year when the BLM Roswell Field Office is asking for proposals to be submitted for project work in Ft Stanton Cave for the 2021 caving season. 2020 was a successful year despite the Covid-19 pandemic and we accomplished some great projects and learned more about FSC. Thanks to all who participated!

Please help by distributing this email, and or the link contained within it, to any caver, grotto, professional, academic, regional, cave related listservs, or groups. Forward to any individual, group or organization that might like to submit a proposal during the open submission period to do cave related projects in the BLM Roswell Field Office.

Please go to the following [BLM website](#) and follow the directions found there.

If you have questions, please email me.

Thanks,

Knutt Peterson knuttpet@blm.gov
ORP Cave and Karst Specialist
BLM Roswell Field Office

- **Now Available: Best Practice Guidelines on Geoconservation in Protected and Conserved Areas**

The International Union for Conservation of Nature (IUCN) has just published *Best Practice Guidelines on Geoconservation in Protected and Conserved Areas*. Although this is number 31 in a series of guidelines that provide an authoritative resource for the world's protected area managers it is the first to address the protection and conservation of geodiversity and geoheritage which is now seen as a fundamental part of nature following broadening of the IUCN definition of a protected area to embrace all of nature. The document includes chapters on general principles of conservation, establishing geoconservation in protected and conserved areas, geoheritage management, dealing with threats to geoheritage and on education and communication for geoconservation. Globally many protected areas contain caves and karst and section 7.1 of the guidelines is devoted to "Karst and cave protected and conserved areas".

The document is intended principally for use by protected area managers, staff and advisors but anyone with an interest in the conservation of cave and karst should also find it useful. The document is available as a free download from [here](#). Please feel free to pass the link on but please do not circulate the pdf. The reason is that IUCN are counting the downloads as an indicator of the interest generated by the Guidelines but there is no way of knowing how often a pdf has been circulated.

- **Special Issue of the Journal Sustainability on Karst and Sustainability**

The journal *Sustainability* is seeking submissions for a special issue on karst and sustainability that will be edited by Bob Brinkmann and Leslie North. The journal is seeking submissions on a range of topics including but not limited to sustainability and karst landscapes, coastal karst systems, karst aquifers, preservation and protection of karst features, cave management, cave ecosystems, and living on karst.

Authors should submit papers [here](#) - More information: rbrinkmann@niu.edu or Leslie.north@wku.edu

Note that the deadline for submitting articles will be extended into the spring.

- **Virtual Field Trip to Laurel Caverns, USA**

The Field Conference of Pennsylvania Geologists occurred virtually this year. The conference included a virtual field trip to Laurel Caverns, led by Katie Schmid. More information about the conference and to access the virtual field trip, visit <https://www.fcopg.org/virtual-conference>



**FIELD CONFERENCE OF PENNSYLVANIA
GEOLOGISTS**

ISCA Calendar

PLEASE NOTE

Some of these events may suffer variations due to the pandemic.

You may contact them for confirmation.

Do you want to add or modify an event? Contact me! juan jotiscar@i-s-c-a.org

Visit our [Facebook page](#) and [ISCA's website](#) for further information.



2021 - International Year of Caves and Karst

26th January – [IYCK 2021 Opening Ceremony](#)

12th - 16th April, 2021 – [16th Multidisciplinary Conf. on the Engineering and Environmental Impacts of Karst](#)

17th April, 2021 – [National Bat Appreciation Day](#)

22nd - 25th April, 2021 – [14th International Symposium on Pseudokarst](#)

May 2021 – [US Geological Survey Karst Interest Group Meeting](#)

3rd - 7th May, 2021 – [Australian Cave and Karst Management Association Conference](#)

2nd - 5th June, 2021 – [2nd Columbian Congress of Speleology](#)

6th June, 2021 – [Int. Day of Caves and the Subterranean World](#)

8th - 13th June, 2021 – [36th Brazilian Congress of Speleology](#)

14th - 18th June, 2021 – [28th Int. Karstological School "Classical Karst": Regional Karstology](#)

22nd - 24th June, 2021 – [EuroKarst 2021: The EU Congress on Karst Hydrogeology and Carbonate Reservoirs](#)

28th June - 2nd July, 2021 – [NSS Convention 2021 \(Weed, California\)](#)

11th - 14th July, 2021 – [Karst Record IX \(KR9\) Conference](#)

25th July - 1st August, 2021 – [18th Int. Congress of Speleology \(France\)](#)

16th - 20th August, 2021 – [34th Int. Geo. Congress: Global Karst Critical Zone and Land Use Planning](#)

22nd - 27th August, 2021 – [47th IAH Congress \(Brazil\)](#)

28th August - 4th September, 2021 – [19th International Symposium on Vulcanospeleology](#)

September 2021 – [Fort Stanton Cave Science Conference](#)

6th - 10th September, 2021 – [48th IAH Congress \(Belgium\)](#)

30th September - 3rd October, 2021 – [26th International Cave Bear Symposium](#)

21st - 24th October, 2021 – [Cave Lighting Workshop](#)

26th - 30th October, 2021 – [6th EuroSpeleo Protection Symposium](#)

29th October - 2nd November, 2021 – [Speleo Kamaraton](#)


2022

29th September – 8th October, 2022 – [ISCA's 9th Congress and NCA Convention \(San Antonio, Texas\)](#)

2022 – [NSS Convention 2022 \(Custer, South Dakota\)](#)

ISCA deadline!

Everything sent **before February 20th, 2020** will be collected and taken into account to appear in ISCA's newsletters.

 **Contact: juan jotiscar@i-s-c-a.org**





INTERNATIONAL SHOW CAVES ASSOCIATION

Join us and become an ISCA Member

Visit www.i-s-c-a.org for details and follow us on Facebook!



INTERNATIONAL SHOW CAVES ASSOCIATION

ABOUT INTERNATIONAL SHOW CAVES ASSOCIATION

The [International Show Caves Association \(ISCA\)](#) was founded in 1990 and is headquartered in [Frasassi/Genga, Italy](#). ISCA is an international organization of persons, associations, corporations, and government agencies who own, manage or operate [show caves](#) that are open to the public. ISCA provides a critical forum for show caves to network and collaborate on matters that pertain to their caves. ISCA aims to promote, encourage, and support the cooperation of show cave operators, speleologists and cave enthusiasts through the sharing of information and to promote the preservation and conservation of caves, while increasing public interest in the world of show caves by way of unique marketing and the evolution of methods to enhance the show cave experience.

Health, Wealth, Happiness & Caves Happy New Year 2021

Thanks to everyone who collaborated

Editor: Juan José Tíscar Moya – **Contact:** juan jotiscar@i-s-c-a.org

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