



"The Salt Guillotine" in Malham Cave (Mt. Sedom, Israel) (EuroSpeleo Project ESP 2018-07).

Photo: Efraim Cohen



This Newsletter is issued by the Bureau of the European Speleological Federation (FSE)

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ISSN 2418-4500

Editorial

This Newsletter reports on the record-breaking EuroSpeleo Project 2018-07 to Malham Cave (Mount Sedom, Israel) and upcoming events on the European (as well as world-wide) speleo agenda. It also features the Clean-up-the-Dark Initiative of the Italian Speleo Federation (SSI), which is supported by the European Cave Protection Commission (ECPC).

Please share this Newsletter as widely as possible amongst caving clubs and individual cavers and all those interested.

The FSE Bureau

FSE is a member of the



Ukraine to enlist Ternopil caves to UNESCO sites

The Ukrainian Ministry of Ecology suggests adding the Ternopil region caves to the list of UNESCO World Heritage Sites. The ministry held preliminary consultations with the Institute of Geological Sciences of Ukraine and the Ternopil Region State Administration.

In particular, it is proposed to add Optymistychna Cave to the list. The length of this cave is 214 km. It is the world's longest gypsum cave and the second largest cave in the world.

The Ternopil region has over hundred caves. Among them are Ozerna (Blue Lakes, 83.5 Km long), Mlynky (14.330 m), Verteba (7.820 m), and many others.

A number of caves are part of the Dniester Canyon National Park.

Source: Internet

EuroSpeleo Projects recently accepted by FSE:

ESP 2019-03 – International Expedition to the Serra da Bodoquena, Brazil

ESP 2019-04 – International Expedition Steres 2019, Crete, Greece

ESP 2019-05 – Conference Man and Karst, Sicily, Italy

ESP 2019-06 – International Expedition Mt. Velebit, Croatia

FSE Partners



Cave and Karst related events

7-10 June 2019

48th French National Speleo Congress - La Ciotat (Marseille). - <https://congresffs2019.fr/>

17-21 June 2019

27th International Karst School "Classical karst": Karst Hydrogeology - Research Trends and Applications
Postojna, Slovenia. - <http://iks.zrc-sazu.si/en/>

17-21 June 2019

NSS Convention - Cookeville, Tennessee, USA. - <http://nss2019.subworks.com/>

19-22 June 2019

35th Brazilian Speleological Congress and 50th Anniversary of the Brazilian Speleological Society - Bonito, Mato Grosso do Sul, Brazil. - <http://www.cavernas.org.br/35cbe/>

24 -26 June 2019

Man and Karst Conference - Ragusa, Sicily, Italy. - <http://www.cirs-ragusa.org>

1-5 July 2019

Symposium on Caves, Karst, and Subterranean Environments
Havana, Cuba. - <http://www.cubambiente.com>

1-5 July 2019

Challenges for Subterranean Landscape Conservation in the World's Karst Regions, 10th World Congress of the International Association of Landscape Ecologists - Milan, Italy. - <http://www.iale2019.unimib.it>

4-9 August 2019

Int. Competition: karst, the last "white spot" – Brestnitsa Karst Geosystem, Teteven, Bulgaria. - <https://prokarstterra.bas.bg/sci-competition>

9-12 August 2019

Sinterlaken, 14th National Swiss Congress of Speleology
Interlaken, Switzerland. - <https://sinterlaken.ch/en/>

11-17 August 2019

Summer School on Speleothem Science (designed for students and Early career researchers) - Cluj-Napoca, Romania. - <https://www.speleothemschool.com/>

15-18 August 2019

German Annual Speleo Meeting
Nesselwang. - <https://www.vdhk.de/jahrestagung.html>

2-8 September 2019

13th Balkan Cavers Camp – Antalya, Turkey
<https://my.pcloud.com/publink/show?code=XZW0mO7ZOkLMYm9SwE5PCM3UlaVlpRv16UYX>

7-10 September 2019

3rd Asian Transkarst Conference – Bohol, Philippines. - <http://www.transkarst2019.com/>

11-13 September 2019

Armenian Conference "Caves as Natural and Cultural Monuments" - Yerevan, Armenia - <http://armconference2019.com/>

12-15 September 2019

Austrian Caver's Meeting – Bad Goisern/Austria - <http://www.hoehlenforschung.at/tagung/>

18-22 September 2019

25th Cave Bear Symposium - Paklenica Nat. Park, Croatia. - <https://my.pcloud.com/publink/show?code=XZCx5K7ZJYIEaUNki0mDxSS2ulfniLLE1si7>

23-27 September 2019

46th IAH Congress (Groundwater Management and Governance Coping with Water Scarcity) - Malaga, Spain. - <http://www.iah2019.org/topics-and-sessions/>

26-29 September 2019

13th EuroSpeleo Forum - Bulgaria, Dolni Lozen, near Sofia. - <https://esf2019.speleo-bg.org/>

19-20 October 2019

BCRA 30th Cave Science Symposium - Nottingham. - <https://www.bgs.ac.uk/contacts/sites/keyworth/home.html>



13TH EUROSPELEO FORUM

2019

26-29 September
Sofia, Bulgaria

See you all very soon in Bulgaria!



Please send info on all your international events (expeditions, congresses, symposia etc.) to contact@eurospeleo.org

90 years of organized speleology in Bulgaria
45 years of cave rescue in Bulgaria



All info at <http://ESF2019.speleo-bg.org>



International Expedition Mt. Sedom 2019. Malham Cave Project - The new longest salt cave in the world

From 22 February to 4 March 2019, an international team of cavers from Israel, Bulgaria, France, UK, Croatia, Romania and the Czech Republic explored and re-surveyed Malham cave, Mt. Sedom, Israel.

Mt. Sedom is 11 km long and 2 km wide. It stretches along the SW part of the Dead Sea, part of the Negev Desert. The summit is 170 m below sea level. It is a salt diapir with a karstic and a non-karstic stratigraphic unit. The karstic unit consists of massive rock salt and the non-karstic cap-rock unit comprises less soluble sediments (mainly anhydrite, clay, sand etc.). The cap-rock and the aridity of the area protect the salt from dissolution. The salt layers accumulated in a lagoon about 8 million years ago. The weight of the rocks above forces the salt to flow up along the basin wall, creating diapirs. Mt. Sedom diapir keeps rising approximately 1 cm per year. The mountain receives around 50 mm of rain annually during heavy rain storms with flash-floods.

Contrary to other rocks, salt dissolves extremely rapidly in water. The creation of salt caves occurs much more quickly than in either limestone or dolomite.

Mt. Sedom caves are fossil and active underground water streams, formed by flash-floods. The surface waters drain downwards through the capping rock. When the water reaches the salt layers it drops into vertical shafts until it reaches passages large enough for

drainage. These passages are semi-horizontal. Some of the caves of Mt. Sedom have an outlet (traverse caves) and others have none (inlet caves). In the latter cases underground salt-water lakes may form. The deepest cave mapped is about 135 m deep. There are about 150 known caves and each year there are new discoveries. Until 2019, Malham cave was the 2nd longest salt cave in the world, 5,685 m in length, resulting from two Israeli-Italian expeditions in the 80's. The cave was originally discovered by the Israel Cave Research Centre in 1981. This was followed by many expeditions in the 1980's exploring and surveying some 100 salt caves in the mountain. A first map of Malham cave was drawn in 1983-84 by the Israel Cave Research Centre and Gruppo Grotte Milano SEM CAI from Italy. Since then, additional passages were discovered and surveyed by Israeli cavers. Interestingly, within several decades, new passages have formed or enlarged to allow humans to pass through, due to the high solubility of the salt. The oldest cave passages were found only 7,000 years old by C14 dating of wooden twigs swept in from the surface.

In 2006, the longest salt cave was 3N Cave, 6,580 m long and mapped by Czech speleologists, located on Qeshm Island in Iran.

The first international EuroSpeleo Project to Malham Cave Project took place in January 2018 with participants from Israel, Bulgaria, Czech Republic, UK, France and Germany. About 6 km were mapped.

Under the motto "Project: Malham - The longest salt cave in the world" the EuroSpeleo Project returned to



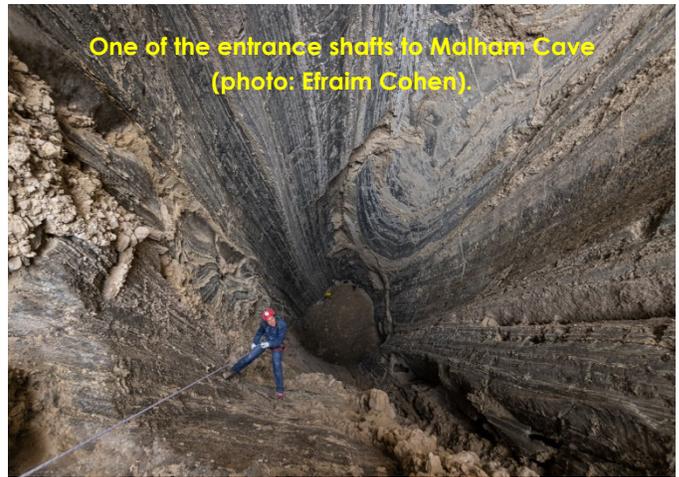
Salt formations in Malham Cave (photo: Efraim Cohen).

Mt. Sedom in 2019 and firmly established Malham cave as the new longest salt cave in the world. The cave, consisting of multi-level stream galleries and 19 entrances (most of them are vertical shafts with the deepest one 92 m deep), is now 10 km long.

Final processing of the mapping data for an electronic map of the cave is in progress. A report of the 2018 and 2019 expeditions, including the new cave map and speleometric data, is in preparation.

The expedition was organized by the Israel Cave Explorers Club, the Israel Cave Research Center at the Hebrew University of Jerusalem and the Caving Club and Speleo School "Sofia", Bulgaria. It was supported by the Bulgarian Federation of Speleology, the Ministry of Youth and Sports in Bulgaria, the European Federation of Speleology (FSE) and FSE's official partners Aventure Verticale, Korda's Ropes and Scurion.

Bulgaria Air was the official carrier of the Bulgarian participants of the expedition.



One of the entrance shafts to Malham Cave (photo: Efraim Cohen).

Invitation to the International Caving Expedition Northern Velebit 2019

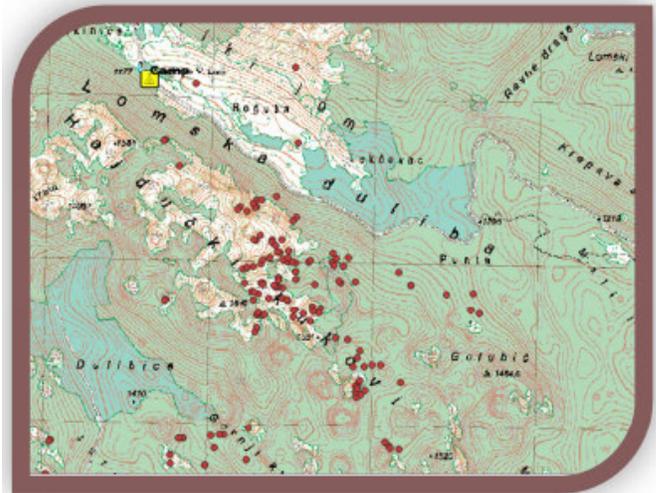
Between 29th July and 11th August 2019 the Speleological Society "Velebit" will organize a speleological expedition in the Croatian National park Northern Velebit. The area ranks among the most interesting speleological sites in the world with a large number of deep vertical caves in a relatively small area. Three pits are deeper than 1,000 m, including Lukina jama, Croatia's deepest cave (-1,431 m).

The main objective of the expedition is a systematic exploration of the area of Hajdučki Kukovi with a more systematic and detailed research of already known objects with possible continuation (e.g. Jama Nedam, -247 m). We also plan to organize visits to some of our famous pits like Lukina jama, Xantipa, and Ledena jama.

Accommodation is in private tents. Three meals will be provided - breakfast, afternoon snack and dinner.

The fee for all participants taking part in the speleological research is 5 € per day. Other activities which do not include speleological research are also possible in agreement with the organizer, but the fee for those is 15 euros per day.

Contact: grandicmarina@gmail.com. After sending an email application, a registration form and additional information will be provided. Deadline for application is 1st of July 2019.





Let's Clean Up the Dark

Caves are looked at in many different ways: some find them dark and scary places that one needs to keep away from, for others they are sacred and need to be respected, but there are also people who consider them to be black holes into which they can conveniently dump their waste...

Thanks to the "Clean up the World" project awareness is growing on the problem of pollution. It is the largest volunteer environmental project in the world. And our beloved caves must not be forgotten. Luckily there are already initiatives focused on cleaning up caves and rising awareness. Cavers themselves have also adopted less invasive and contaminating habits, the formal speleology didactic system includes a specific chapter on environmental education and cavers around Europe have taken strong action in legal battles, public awareness campaigns and de-pollution activities.

In Europe cavers have always been engaged in cave cleaning activities, but since 2005 there has been a sustained movement: the Italian Clean up the Dark initiative (Puliamo il Buio) coordinated by the Italian Speleological Society (SSI). This project was awarded the 1st prize of the EuroSpeleo Protection Label by the European Speleological Federation (FSE) during the EuroSpeleo Forum 2018 in Austria.

To date, the initiative has recorded 2,908,394 hours of work by speleologists to safely and regularly extract waste materials such as plastic, glass or metal residues, cardboard, wood, chemicals, etc. with an estimated 148,000 kg of collected waste. In addition to the cleaning actions events such as conferences, presentations or round tables have been held to promote awareness on the protection of the caves. An estimated 2,000,000 people, amongst local populations and visitors of tourist caves have been reached.

Motivated and inspired by the Italian and other clean-up initiatives, several European speleological organizations are interested to join forces into a European network and platform for cave cleaning and protection. In a first phase we want to collect information on the past or current de-pollution activities in caves in European countries, or even in the world. And for that, we need your knowledge and help!

Do you know of any completed or ongoing cave cleaning project? Help us gather this information and fill out the short google form: <https://forms.gle/QgiNqE1Ea2SMjpGTA> or email to: cleanupthedark@socissi.it.

Thank you!

Ferdinando Didonna, Francesco Maurano, Bärbel Vogel and Sarah Linders for the Italian Clean Up the Dark initiative. An initiative supported by the European Cave Protection Commission (ECPC).

