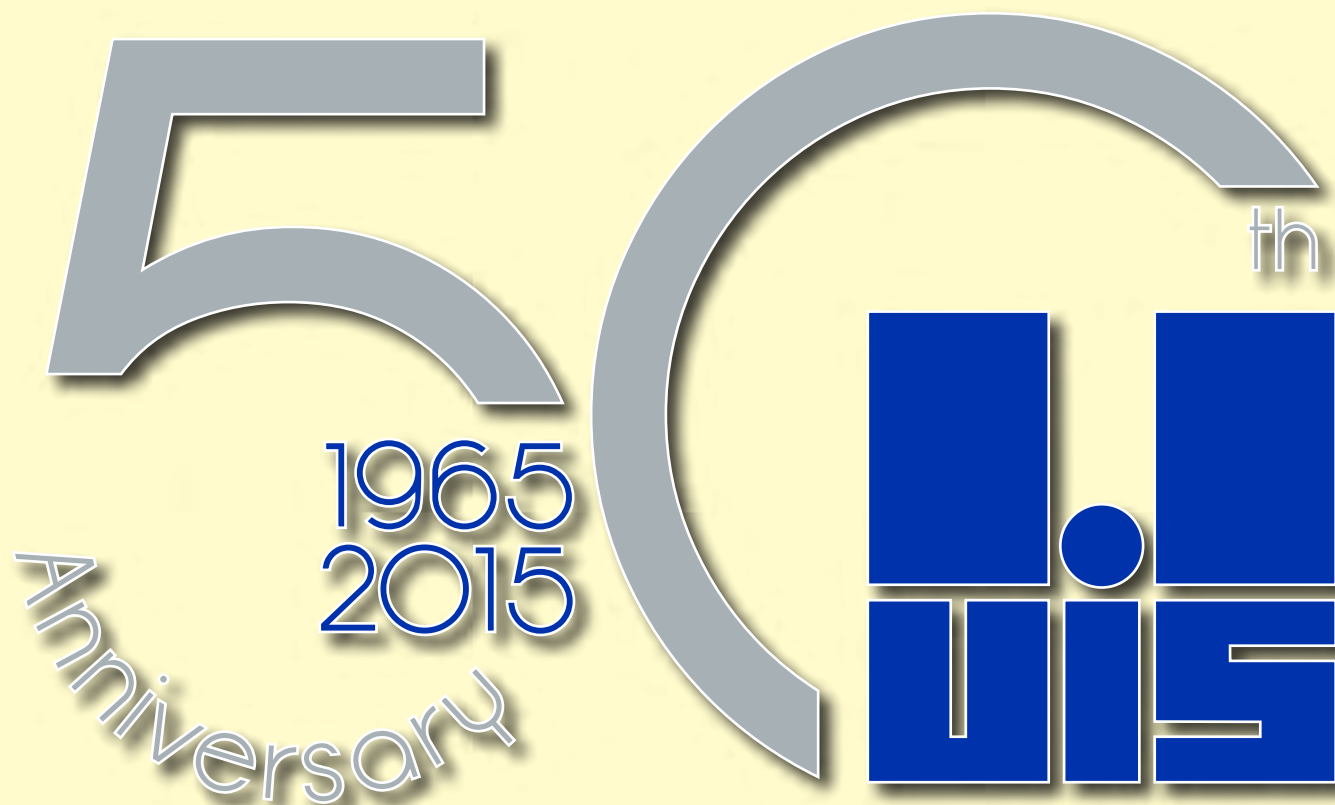


Postojna, Slovenia, June 2015



Join us.
You belong to this history.

ALSO IN THIS ISSUE:

- UIS Bureau Meeting in Sydney, Australia
- Help for building new cave/karst database
- Guidelines for Development and Management of Show Caves
- **Guide for submitting and publishing articles in the UIS Bulletin**
- Caving Inclusive tourism
and more...



Official publication of the UIS for publicizing the activities of the UIS and the state of the art of international speleology - 2013©

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GRAPHIC EDITION

Nivaldo COLZATO (Brazil)

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Union Internationale de Spéléologie

Founded in Postojna, Slovenia, 1965

The UIS is a non-profit, non-governmental worldwide speleological organization that promotes the development of interaction between academic and technical speleologists of a wide range of nationalities to develop and coordinate international speleology in all of its scientific, technical, cultural and economic aspects.

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Dr. Fadi NADER - UIS General Secretary
fadi.nader@gmail.com

Alternatively, write to:

Union Internationale de Spéléologie
Titov trg 2 - 6230, Postojna - Slovenia

WEBSITE:

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

SCIENTIFIC MEMBER OF



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Guide for submitting and publishing articles in the UIS Bulletin.

CLICK HERE!

COVER

Logo commemorating the 50th Anniversary of the UIS

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REMEMBER
SAVE A TREE;
DO NOT PRINT
IF UNNECESSARY

Editorial

A TIME TO CELEBRATE

By Efraín MERCADO (Puerto Rico)
 UIS Vice-President of Operations
emercado@caribe.net

Time is a matter of appreciation. It was said by John Randolph, an US Politician (1773-1833) that –“Time is at once the most valuable and the most perishable of all our possessions.”- Thinking about that and ready for the upcoming celebration of the 50th Anniversary of the foundation of the Union Internationale de Spéléologie (UIS), we need to see how the strong and well directed will of men and women of science throughout the world and met at Postojna in 1965, in Postojnska jama cave, has marking a glorious step in the world’s underground environment.

As a matter of fact, a long list of brilliant people has spent their lives, their wisdom, and their time to elevate the speleology to its actual rank. This people, with character, vision and courage face a bright future; do their best, even though some of them are not present to celebrate with us. To the ones that still are among us we have to praise and enjoy. To the ones that depart, we have to honor them. Time is the most valuable and most perishable of all our possessions and we have the intention to make it bright as ever, as valuable as ever, and as wise as ever too.

Great organizations are often attached to great institutions. UIS is proudly grandfathered by the Karst Research Institute ZRC SAZU, of Slovenia and the Management of Postojnska jama d.d. in its 50th Anniversary. It could not be better, as said once by a remembered and famous Belgian caver, André Slagmolen, - “the berry that crowns the succulent desert”- Certainly we have to celebrate.

Meanwhile there are a lot of other projects happening at the same valuable and perishable time. The UIS has worked together to strengthen the value of our nation members, creating programs to sponsor the growth of speleology and its scientific assets. Those programs are meant to make speleology to scientist and cavers more reachable in areas where it needs some backup. One of its valuable assets is the revised Code of Ethics. This fine piece of work was intertwined for many years by very knowledgeable scientists and cavers in order to update and get with the current practices worldwide. It was done proudly

with the will to improve the best caving practices available and to reach new lines of understanding.

The new guidelines for show caves are also a keystone document for the protection of those caves that have been developed for tourism. It was worked by the International Association of Show Caves (ISCA) and accepted by UIS as valuable way to protect and develop caves in a wise way. Cave protection is a must in times were fast growing of tourism is in demand. UIS Cave Protection Department has played an excellent role in this.

The existence of the UIS for 50 years is intrinsically inherent to the history of the world of caving and science. A structure developed to be run by volunteers that still works fine have to be proudly celebrated. We are a growth and mature organization that performs well adapting speleology to the environment of our society. A good example of this is mentioned in this issue of the UIS Bulletin by means of an article by a young caver from México, Mónica Ponce. She explains the way speleology becomes inclusive for people with certain physical disabilities, making caving possible for them. It is also happening in Brazil and in other nations. This is something to celebrate! We are in some way breaking paradigms and transforming our way of being and thinking. This is a new era of openness. In the next 50 years UIS will perform as strong as ever.

In the same line there are aspects of speleology that needs a close attention. Some accidents during research and expedition have occurred, exposing the fragile side of the equation. Certainly we need to stress on the need of good planning, paying attention to those small things that could make our lives difficult. But the good news is that a lot of good will cavers are getting training more often. There are lessons to learn and more things to work with until our valuable and perishable time gets in and face us. Meanwhile UIS is getting stronger, more affordable and easy to reach to all cavers worldwide.

Let’s celebrate!




ACTIVITY REPORT 2014

COMMISSION ON ARTS AND LETTERS

By Ian Ellis CHANDLER, MA. (Spain), President
artcaves@yahoo.es

Photos by the author

In addition to the ongoing annual art exhibitions for the NSS, USA (with workshops) and in the UK with the Hidden Earth Conference Art Show and competition there was a EuroSpeleoForum meeting.

This was organised by the Romania Speleological Federation and held in Baile Herculane, in North-Western Romania from the 21st – 24th of August 2014. The town dates back to Neolithic times and has mythological ties to Hercules.

Two hundred speleologists from twenty countries within Europe attended the gathering while there were two participations from as far away as Indonesia and Brazil.

The event included an Arts Festival. An exhibition of work was presented in the congress hotel showing over twenty pieces of art and representing

artists from the UK, USA, Japan, UK/Spain, Iran/Austria and Romania.

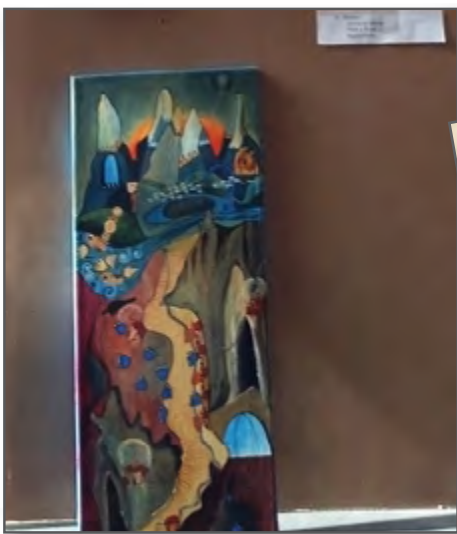
Two further shows were for the best decorated old caving boot and for a cave cartography map in the style of a medieval map.

A workshop for adults and children allowed cave themes to be moulded in clay.

Many thanks go to Angela Szabo for organising this excellent festival.

Next year EuroSpeleoForum will be held in Peretosa-Auletta (SA), Italy, from the May 31st - 2nd June, 2015, together the XXII Italian National Congress of Speleology (www.congressospeleo2015.org), where it is expected that an art exhibition will be mounted.

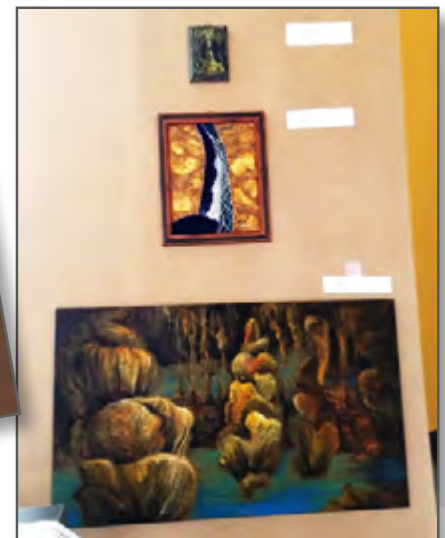
More people have now joined the Commission on Arts and Letters.



TK Art Fest



TK Art Fest



CS Art Fest



Boots Art Fest



TK Art Fest

Works exhibited during the Arts Festival in Baile Herculane, Romania,



ACTIVITY REPORT 2014

COMMISSION ON CAVE DIVING

By Maxime de GIANPIETRO (Switzerland), President
uiscdc@yahoo.com

The highlights of the Cave Diving Commission activities during the year 2014 may be summarized as follows :

FEBRUARY

Production of the documentary “Rescue in Bouclans Spring”. The documentary focuses on how a multisumps cave diving rescue operation works. The aim is to highlight the challenges that such an intervention means to traditional rescue teams, letting them better understand the needs and constraints of cave diving rescue specialists when planning a joint rescue operation.

MARCH

Production of another documentary “The Exploration of the Creuse Spring” - a documentary about a multisumps exploration in Eastern France that has been going on for 10 years.

Both documentaries will be released during the first semester of 2015 and will be available on the website of the commission <http://cdcuiss.wordpress.com/>.

JUNE

The president of the UIS Cave Diving Commission was invited to attend, as a guest, the annual meeting of the French Cave Diving Commission (*Commission Plongée de la FFS-Fédération Française de Spéléologie*) which was held during the annual congress of the French Speleological Society (FFS) in the French Jura.

FORTHCOMING EVENTS 2015

ITALY

An international meeting will be held in Sardinia on May 23rd 2015. The Organizing Committee is composed by the Sardinian Spelological Federation (FSS) and the Cave Diving Commission (CNS) of the Italian Speleological Society (SSI).

The place chosen is the town of Dorgali (Nuoro). The congress will highlight the main outcomes in the exploration of the karst underwater system along the Orosei gulf during the last 50 years.

Among the invited explorers and among them the first ones: Jochen Hasenmayer and Lamberto Ferri Ricchi. Part of the session will be devoted also to re-

ports on other exploration areas and new cave diving equipment.

More info: leofancello@tiscali.it

FRANCE

The French Cave Diving Commission (of the FFS) plans to organise a course aimed at developing cave diving skills while using underwater scooters (DPVs). Date and place shall be published soon on the website of the cave diving school of the EFPS. <http://efps.ffspeleo.fr/>.



Margrit Hohl exploring the Douce Spring in Ardèche, France.



Giorgio Cobol exploring the Timavo Resurgence, near Trieste, in Italy in 1959.

Symposium Report

XVth INTERNATIONAL SYMPOSIUM OF SPELEOTHERAPY

“Wieliczka” Salt Mine, Poland - 23-25 October 2014



By MSRII, Dr.b., Ph.D. Iuri SIMIONCA (Romania)

President of UIS Permanent Commission on Speleotherapy (PCS)

Pr. Immunologist National Institute for Rehabilitation, Physical Medicine and Balneoclimatology (Romania, Bucharest)

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“The Permanent Commission on Speleotherapy (PCS) / Commission Permanente de Spéléothérapie (CPS) of Union Internationale de Spéléologie (UIS) / International Union of Speleology (UIS)

“THE XVth INTERNATIONAL SYMPOSIUM OF SPELEOTHERAPY” (“THE XVth ISS”),
2014, WIELICZKA, POLAND

- MSRII, Dr.b., Ph.D. Iuri SIMIONCA, President of PCS/CPS-UIS
Chairman of International Scientific Committee of “The XVth ISS”, Romania

- Ph.D., MD., Yaroslav CHONKA, Vice-President of PCS/CPS-UIS
Vice-Chairman of International Scientific Committee of “The XVth ISS”, Ukraine

- Ph.D., Eng. Kajetan d’Obyrn – Chairman of the Board “Wieliczka” Salt Mine Inc., Poland
Honorary Patronage Member of “The XVth ISS”

In October 23-25, 2014 in “Wieliczka” Salt Mine (Poland) was held “The XVth International Symposium of Speleotherapy (“The XVth ISS)” of “The Permanent Commission on Speleotherapy (PCS)/ Commission Permanente de Spéléothérapie (CPS) of Union Internationale de Spéléologie (UIS).

The XVth ISS, according to the proposal of PCS/CPS-UIS and “Wieliczka” Salt Mine Board, was dedicated to those 50 years since the official opening of the first salt mine underground sanatorium - Allergological Sanatorium “Kinga” in “Wieliczka” Salt Mine, Poland.

TOPICS OF THE XVth ISS

- The history of of speleotherapy / subteraneotheapy in Wieliczka Salt Mine, Poland for threatment of patients with bronchial asthma and other chronic respiratory diseases.
- The history of speleotherapy and halotherapy.

- Microclimate, physical, chemical, microbiological and other studies in various mines and caves to assess the presence and quality of therapeutic factors for used in health and balneo-climate (spa) tourism.

- Management, protection, engineering problems, exploitation of various mines and caves for speleotherapy.

- The structure of underground sections in mines and caves with speleotherapeutic factors. Methods of speleotherapy.

- Halotherapy, halotherapeutic chambers and methods; salt aerosol generating systems and similar equipments.

- Experimental results of the speleotherapy and haloterapy effects on systems and mechanisms involved in different diseases.

- The clinical effect of speleotherapy and halotherapy for patients with various diseases.

- Mechanisms of the speleotherapy and halotherapy

- The use of speleotherapy in prophylaxis, treatment and rehabilitation of patients with different pathologies.

- The use of speleotherapy with other complemen-

tary and alternative methods (CAM) for prophylaxis, treatment and rehabilitation of patients with different pathologies.

- Standards of geomechanical stability of the underground spaces in caves and mines which possesses speleotherapeutic factors and used for medical purposes. balneoclimatic tourism or speleo- and salt mine tourism;
- Standards specific to speleo-therapy domain and descending methods.
- Structure of the medical institutions with speleo-therapy methods.
- Climatical characteristics of the geographic zones with speleotherapeutic potential.

ORGANISERS OF THE XVth ISS

Were the PCS/CPS-UIS and the main organizers institutions from Poland:

- "Wieliczka" Salt Mine
- "Wieliczka" Salt Mine Tourist Route
- "Wieliczka" Salt Mine Health Resort
- Department of Clinical and Environmental Allergology of Jagiellonian University Collegium Medicum from Krakow
- SP ZOZ MSW Hospital in Krakow
- Kraków Saltworks Museum

HONORARY PATRONAGE

- Ph.D. Eng. Kajetan D'Obyrn – Chairman of the Board the 'Wieliczka' Salt Mine Inc.
- Wojciech Kozak - Vicemarshal of the Malopolska Voivodship
- Prof., Dr. Eng. George Veni - Vice President of the Union Internationale de Speleology (UIS); Executive Director at National Cave and Karst Research Institute (NCKRI), Carlsbad, New Mexico, U.S.A.

INTERNATIONAL SCIENTIFIC COMMITTEE

HONORARY MEMBERS

- Prof., Dr., MD, Svetozar Dluholucky - Honorary President of the PCS/CPS-UIS; Banska Bystrica Medicine University, Slovakia.
- Prof., Dr. hab., MD, Irena Ponikowska - President of Polish Association of Balneology and Physical Medicine; Consultant to the Minister of Health on Health Resort Medicine. Clinic of Balneology and Physical Medicine of the Medical University in Bydgoszcz, Poland.
- Prof., Dr., MD, Pavel P. Gorbenko - Advisor Member of Working Subgroup „Halotherapy (speleo-therapy in artificial salt chambers)” of the PCS/CPS-UIS; Rector at „National Institute of Health”: Social Technopark; Member of the IAESMN & PASA; Sankt Petersburg, Russia.

MEMBERS OF INTERNATIONAL SCIENTIFIC COMMITTEE

- Chairman: M.S.R.II, Dr., Ph.D, (microbiol., immunol.), Iuri Simionca - President of the Permanent Commission on Speleo-therapy / Commission permanente de spéléothérapie (CPS) – UIS; National Institute of Rehabilitation, Physical Medicine and Balneoclimatology, Bucharest, Romania
- Vice Chairman: Ph.D., MD., Jaroslav Chonka -Vice-President of the PCS/CPS-UIS, Chairman of Working Group “Speleo-therapy in salt mines and salt chambers”; General Director of Republican Allergological Hospital, Solotvino, Ukraine.
- Vice Chairman: Ph.D., MD, Ewa Czarnobilska - Head of Department of Clinical and Environmental All-



Members of International Scientific Committee and Organizing Committee of XVth ISS - Symozjum Wieliczka.

gology, Chair of the Department of Toxicology and Environmental Diseases, Jagiellonian University Collegium Medicum, President of the Polish Society of Allergology in Malopolska, Krakow, Poland.

- Vice Chairman: MUDr., Pavel Slavik, Head physician - Vice-President of the PCS/CPS-UIS, Chairman of Working Group „Speleotherapy in carst and other caves”; Moravia Children’s Sdpecialized Health Care Center. Children’s Sanatorium with Speleotherapy, Ostrov by Macocha, Czech Republic.

- Prof., Dr., MD. Ivan Lemko - Advisor Member of Working Subgroup „Halotherapy (speleotherapy in artificial salt chambers) - Working Group „Speleotherapy in salt mines and salt chambers” - The PCS/CPS-UIS; Director of Scientific-Medical Centre and Clinic „Rehabilitation”, Health Ministry of Ukraine; University, Uzhgorod, Ukraine.

- Ph.D, MD., Krzysztof Czarnobilski -Advisor member of Working Group „Speleotherapy in salt mines and salt chambers” - The PCS/CPS-UIS; Head of the Department of Geriatrics and internal diseases od SP ZOZ MSW Hospital, Krakow, Poland.

- Ph.D. Teresa Latour – Head of the Department of Health Resort Materials of the National Institute of Public Health, Warsaw , Poland

- University Lecturer, Ph.D., MD, FCCP, Claudia Biha – Advisor member of Working Group “Speleotherapy in salt mines and salt chambers” - The PCS/CPS-UIS; Primary care physician Pneumology, University and County Hospital, Suceava, Romania.

- Ph.D. Eng. Lucyna Rajchel - Department of Geology and Mining reservoir of AGH University of Science and Technology, Kraków, Poland.

- Ph.D.(Eng. Geol.) Ovidiu Mera - Responsible Secretary of thePCS/CPS-UIS; S.C. TURDA SALINA DURGĂU S.A., Turda, Romania.

- Ass. Prof., SR. III, Ph.D., (physics, climatology) Liviu Enache – Member of Working Group: Assessment of potentially curative underground environment in caves, mines and other artificial spaces; measurement techniques - The PCS/CPS-UIS; National Institute of Rehabilitation, Physical Medicine and Balneoclimatology, Bucharest, Romania.

ORGANIZING COMMITTEE OF THE XVth ISS

ORGANIZING COMMITTEE OF THE PCS/CPS-UIS

- M.S.R.II, Dr., Ph.D (microbiol., imunol.), Iuri Simionca - President of the PCS/CPS-UIS; National Institute of Rehabilitation, Physical Medicine and Balneoclimatology, Bucharest, Romania.

- Ph.D., MD., Jaroslav Chonka -Vice-President of the PCS/CPS-UIS (*in memoriam*), Chairman of Working Group “Speleotherapy in salt mines and salt chambers”; General Director of Republican Allergological Hospital, Solotvino, Ukraine.

- Ph D., (Eng. Geol.), Ovidiu Mera - Responsible Se-

cretary of the PCS/CPS-UIS; S.C. TURDA SALINA DURGĂU S.A., Turda, Romania, e-mail: ovidiumera@yahoo.com

- Ph.D., (biol.) Mihail Hotetiu - Bibliography & Website Responsible of the PCS/CPS-UIS; National Institute of Rehabilitation, Physical Medicine and Balneoclimatology, Bucharest, Romania, e-mail: hotetiu@yahoo.com

- SR III, Ph.D. (biol). Constantin Munteanu – Advisor secretary of the PCS/CPS-UIS; General Secretary of Romanian Association of Balneology; National Institute of Rehabilitation, Physical Medicine and Balneoclimatology, Bucharest, Romania, e-mail: constantin2378@yahoo.com

- M.Sc. Vanja Debevec Gerjevič - Principal Advisor Responsible Secretary of the PCS/CPS-UIS; JZ Park Škocjanske jame; Slovenia, e-mail: vanja.debevec@psj.gov.si

“WIELICZKA” SALT MINE (POLAND) ORGANIZING COMMITTEE

- President: MSc. Eng. Marian Leśny - President of the Board – the “Wieliczka” Salt Mine Tourist Route Sp. Z o.o

- Vice-President: MSc., Ec. Jakub Czerwiński - Advisor Member of Working Group “Speleotherapy in salt mines and salt chambers” - PCS/CPS-UIS; Director of Health Resort – „Wieliczka” Salt Mine.

- Responsible Secretary: MSc.. Magdalena Kostrzon - Advisor Secretary of the PCS/CPS-UIS; “Wieliczka” Salt Mine Health Resort, Research and Development Authorized Official, e-mail: symposium@kopalnia.pl

OPENING CEREMONY

In the Conference Hall from underground of “Wieliczka” Salt Mine – Drozdowice IV Chamber.

- Members of the International Scientific Committee and Organizing Committee of the XVth ISS.

- Participants of the XVth ISS

- Guests

- Welcome from the ‘Wieliczka’ Salt Mine - Ph.D., Eng. Kajetan d’Obyrn - Chairman of the Board of the ‘Wieliczka’ Salt Mine Inc. & HONORARY PATRONAGE (Poland) and MSRII, Dr.b., Ph.D. Iuri Smionca, President of the PCS/CPS-UIS, Pr. Immunologist at National Institute of Rehabilitation, Physical Medicine and Balneoclimatology, Bucharest (Romania).

OPENING OF THE XVth ISS

- Welcome from MSc. Wojciech Kozak - Vice-marshal of the Malopolska Voivodship – the honorary patronage of event.

- Welcome from the Republican Allergological Hospital, Solotvino (Ukraine) - General Director, Ph.D., MD. Yaroslav Chonka, Vice-President of the PCS/CPS-UIS; Chairman of PCS/CPS Working Group ‘Speleotherapy in salt mines and salt chambers’.

- Special guest Mrs Halina Skulimowska – wife

of Prof. Dr. Mieczyslaw Skulimowski.

• Inaugural scientific lecture delivered by Professor. Assoc. Irena Ponikowska, presented the current state and prospects for development of health resort treatment.

PARTICIPANTS

I - Total participants: 80

inclusively from: Ukraine (25), Poland (22), Romania (10), Italy (6), United Kingdom (3), United States of America (3), Canada (2), Czech Republic (2), Hungary (2), Republic of Moldova (2), Russia (1), Belgium (1), and Germany (1).

II - Institutions from different countries represented by participants: 51

1. "Permanent Commission on Speleotherapy (PCS) / Commission permanente de spéléothérapie (CPS)" of the World Organization "Union Internationale de Spéléologie (UIS) / International Union of Speleology" (member ICSU & UNESCO).

2. "Wieliczka" Salt Mine, Wieliczka, Poland with "Wieliczka" Salt Mine Tourist Route Sp. Z o.o and „Wieliczka" Salt Mine Health Resort.

3. Institute for Water Supply and Environmental Protection, Cracow University of Technology, Cracow, Poland.

4. Malopolska Voivodship, Krakow, Poland.

5. Polish Association of Balneology and Physical Medicine. Warsaw, Poland

6. Department of Balneology and Physical Medicine. Medical College in Bydgoszcz, Nicolaus Copernicus University, Poland.

7. Department of Clinical and Environmental Allergology of Jagiellonian University Collegium Medicum, Krakow, Poland

8. Polish Society of Allergology in Malopolska, Krakow, Poland. SP ZOZ MSW Hospital in Krakow, Poland.

9. Microbiology Unit, University Hospital, Krakow, Poland

10. Krakow Saltworks Museum, Poland.

11. Department of Health Resort Materials of the National Institute of Public Health, Poznan, Poland.

12. Department of Geology and Mining reservoir of AGH University of Science and Technology, Kraków, Poland.

13. Narodowy Instytut Zdrowia Publicznego-Państwowy Zakład Higieny, Krakow / Warsaw, Poland.

14. Salsano Haloterapia Polska, Sulejówek, Poland.

15. SE "Ukrainian Allergic Hospital, Health Ministry of Ukraine", Transcarpathian region, Tyachiv district, Solotvino, Ukraine.

16. Regional Alergologic Hospital, Transcarpathian region, Tyachiv district, Solotvino, Ukraine.

17. Scientific-practical Medical Centre "Rehabilita-

tion" Health Ministry of Ukraine, Uzhgorod, Ukraine.

18. University, Uzhgorod, Ukraine.

19. Hospital in Stebnik, Lviv, Ukraine.

20. Socialtechnopark Transcarpatian section, Tyachiv, Transcarpatia, Ukraine.

21. Danylo Halytsky Lviv National Medical University, Ukraine.

22. Novovolynsk central hospital, Ukraine.

23. National Institute of Rehabilitation, Physical Medicine and Balneoclimatology, Bucharest, Romania.

24. National Salt Society-SALROM SA, Bucharest, Romania.

25. University "Stefan cel Mare", Suceava, Romania.

26. Emergency County Hospital, Pneumology Department, Suceava, Romania.

27. University of Bucharest, Dept of Molecular Biology and Biochemistry, Bucharest, Romania.

28. S.C. TURDA SALINA DURGĂU S.A., Turda, Romania.

29. Turda Municipal Hospital, Cluj County, Romania

30. Romanian Association of Balneology, Bucharest, Romania.

31. Horia Hulubei National Institute of Physics and Nuclear Engineering - IFIN HH, Magurele, Romania.

32. University of Medicine and pharmacy "Grigore T. Popa" Iași, Romania- Pediatric Department.

33. The Academy of Scientists, Bucharest, Suceava Department, Romania.

34. Italkali Spa, Contrada Raffo, Petralia Soprana, Sicilia and Torino, Piemonte, Italy.

35. Municipality Petralia Soprana, Italy

36. SANATORIUM EDEL s.r.o., ZLATÉ HORY, Czech Republic.

37. Institute of Public Health, Ústí nad labem, Czech Republic.

38. Halomed North America, Inc., Vienna, Virginia (VA 22180), United States of America.

39. Salt Chamber, LLC - Salt Therapy Association, Boca Raton, FL 33432, United States of America.

40. Department of Pathology, University of Louisville, Louisville, KY, United States of America.

41. National Institute of Health", Sankt Petersburg, Russia.

42. Social Technopark, Sankt Petersburg, Russia.

43. Saint – Petersburg Institute of Prophylactic Medicine, Sankt Petersburg, Russia.

44. Beton tool ltd, London, United Kingdom.

45. Salisburyvillas.freeserve.co.uk, Royston, Hertfordshire SG8 5PU, United Kingdom.

46. Salzheilstollen Berchtesgaden, Berchtesgaden, Germany.

47. The Salt Room, Nova Scotia, Canada.

48. Institute of Respiratory Hygiene and Halotherapy, Budapest, Hungary.

49. Saltchamber Belgium, Geetbets, Belgium.

50. "Salt Chamber" in Sanatoria & Preventoria,

Academy of Sciences, Chisinau, Republic of Moldova.

51. Republican Center of Speleotherapy, Institute of Naturotherapy, Erevan, Republic of Armenia.

III - Professors, scientific researches I-II, doctors of sciences, master of sciences: 36 inclusively Professors/scientific researches I – II and Doctor of sciences (7), Doctors of sciences (24), Master of sciences (5).

IV - Participants of different professions and functions in workplaces: 80

(among which 23 heads of departments and laboratories, directors and managers of institutions and also leaders of associations and societies), inclusively:

1) With medical and biological specialty (54):

- medical doctors – pulmonologists (3)
- medical doctors – allergists (3)
- doctors of children (2)
- medical doctors - specialists in balneotherapy or climatotherapy (3)
- medical doctors (pulmonologists, allergists, of internal diseases, paediatricians, specialists in medical rehabilitation, balneotherapy or climatotherapy) - who practice speleotherapy / subterraneanotherapy cure in carst or salt caves and salt or of another origin galleries from salt and another mines for patients with bronchial asthma, chronic bronchitis and other chronic respiratory or skin diseases (19)
- medical doctors (pulmonologists, allergists, of internal diseases, paediatricians, specialists in medical rehabilitation, balneotherapy or climatotherapy) - who practice halotherapy cure in patients with bronchial asthma, chronic bronchitis and other chronic respiratory or skin diseases (15)
- medical doctors of other medical specializations (1)
- kineotherapists (2)
- microbiologists (2)
- immunologists, cell biologists (4)

2) Engineers, economists and marketing specialists (26):

- engineers geologists (3)
- engineers geophysicists (3)
- mining engineers (7)
- speologists (2)
- engineers chemists (2)
- computer science and electronics engineers (3)
- economists (2)
- marketing specialists (4)

V - Lectures, scientific reports and communications and also posters presented in symposium sessions: 36

The works presented in the XVth ISS referred to many aspects - from the study of issues related to microclimate study of underground galleries from salt

and other origin mines and carst caves, to assessment of the speleotherapy / subterraneanotherapy impact on the patients' health with different chronic respiratory pathologies.

VI - Abstracts and articles published in the journal "Acta Balneologica", 2014, v.3.: 47 see in <http://actabalneologica.pl/wp-content/uploads/2014/12/2014-3-all.pdf>

VII. Scientific reports, lectures, communications and posters discussed and remarked in the scientific sessions:

In 24.10.2014 (Friday) at the:

SESSION I

"The history of speleotherapy / subterraneanotherapy treatment in the world. Perspectives of development, management and protection of mines and caves used for speleotherapeutic purposes"

Moderators:

1. Prof., MD., PhD Irena Ponikowska - Polish Association of Balneology and Physical Medicine; Consultant to the Minister of Health on Health Resort Medicine. Clinic of Balneology and Physical Medicine of the Medical University in Bydgoszcz (Poland);
2. PhD., Eng.Kajetan d'Obyrn - 'Wieliczka' Salt Mine Inc.(Poland);
3. Mrs Sylvia Beamon – Privat - salisburyvillas.free-serve.co.uk (United Kingdom);
4. Eng. Nicolae Grudnicki – Director, National Salt Company SALROM SA (Romania)/ Eng. Liviu Soare – Director of Salt Mine "Slănic Prahova", SALROM SA (Romania);.
5. PhD. Eng. Geol. Ovidiu Mera – SC. Turda Salina Durgau SA; Responsible Secretary of PCS/CPS-UIS (Romania).

Presentations:

1. Irena Ponikowska

Current status, progress and forecasts for development of Polish health resort medicine (Inaugural Lecture, 20 min): "Balneology and Physical Medicine is the field of medicine that deals with the study and use of specific, natural methods for treatment, prevention and rehabilitation". "The balneology and physical medicine includes: speleotherapy, climate therapy, microbiology, health resort, geology and balneochemistry".

"Balneology and Physical Medicine is constantly evolving using new methods of treatment and upgrading the old ones. Modern equipment and technologies are no longer a surprise.



The XVth ISS, Session I. Lecture of Prof. Dr. Irena Ponikowska.

In forecasting the development of balneology and physical medicine the usefulness and effectiveness of methods for treatment and prevention of chronic diseases should be taken into consideration, in particular". "Balneological methods are helpful in proceedings aiming to slow aging and maintain good physical and mental condition of the elderly.

The diseases that have appeared in recent years, being the outcome of civilization progress, should also be taken into account".

2. Kajetan d' Obyrn, Krzysztof Brudnik

'WIELICZKA' SALT MINE - From water hazard to water treatment (Lecture, 20 min): "The biggest natural risk for 'Wieliczka' Salt Mine is water." "In 1992 the water catastrophe at the Mina gallery forced the management to develop a new strategy for disposal of saline water outflows, used for leaching of rock salt".

"In 2011 the Minister of Health confirmed the possibility of a health resort in the area recognised as a spa treatment center in the underground mining excavations of 'Wieliczka' Salt Mine, Inc."

"The research results proved to be eligible for balneotherapy, since they are characterised by specific

properties of curative water component - mineralization.

On 30th December, 2013, the National Institute of Public Health- National Department of Hygiene in Poznan, based on the mentioned results, issued certificates confirming the healing properties of water from the spontaneous outflows WVII-16 and WVI-32".

3. Wojciech Gawroński

The history of medical treatment in the „Wieliczka” Salt Mine (Oral presentation 15 min): "The first underground allergology sanatorium was opened in 1964 which was not only the first in the country but also in the world".

4. Jakub Czerwiński

Promotion of Medical Tourism in 'Wieliczka' Salt Mine on International Market (Oral presentation, 15 min): "In 2013 'Wieliczka' Salt Mine Health Resort started the project 'Promotion of Medical Tourism in Wieliczka Salt Mine on International Market' and obtained funds under the Operational Programme Innovative Economy 2007-2013, co-financed by the European Regional Development Fund.

The objective of Sectoral Programme for the

Promotion of Medical Tourism Industry is to create new powerful Polish brands, that will be recognized worldwide and therefore, associated with the country of their origin”.

5. O. MERA, D.T. MERA, Adriana POPA, Iu. SIMIONCA, R. CĂLIN, M. HOTETEU, C. MUNTEANU, L. ENACHE

Turda Salt Mines-potential and perspectives for speleotherapy and balneoclimatic tourism (Oral presentation, 15 min): “Following performed investigations have resulted data regarding the temperature, humidity, chemical composition of air, the movement air flow, pressure, air ionization, radioactivity, aerosol concentration in the air in salt mines and galleries and that of microorganisms in underground environment respectively.

It was confirmed the beneficial therapeutic effect of the salt mine microclimate on the patients with bronchial asthma and was established methodology of treatment.

Results of performed studies confirm that the old salt mines in Turda can be used for therapeutic and tourism purposes. The investments for the opening a new speleotherapy department in the Salt Mine Joseph from Turda are perfectly justified”.

SESSION II

“The current status and prospects of speleotherapy in salt mines and other mining cavities, in the karst caves and of other origin. The underground speleotherapeutic factors, quality and mechanisms of curative effect. Experimental results”

Moderators:

1. Ass.Prof., SRIII, PhD (physics, climatology) Liviu Enache – Member of Working Group: Assessment of potentially curative underground environment in caves, mines and other artificial spaces; measurement techniques – the PCS/CPS-UIS; National Institute of Rehabilitation, Physical Medicine and Balneoclimatology, Bucharest (Romania);

2. MSc., Eng. ec. Jacob Czerwinski – Director of “Wieliczka” Salt Mine Health Resort; Advisor Member of Working Group “Speleotherapy in salt mines and salt chambers” of PCS/CPS-UIS (Poland);

3. SRIII, PhD., Constantin Munteanu - Advisor Secretary of PCS/CPS-UIS; President of Romanian Association of Balneology; National Institute of Rehabilitation, Physical Medicine and Balneoclimatology, Bucharest (Romania);

Presentations:

1. Enache Liviu, Bunescu Iulia (Romania)
The microclimate and natural air ionization in

some salt mines – environmental factors with therapeutic potential (Oral presentation, 15 min):

“1. The microclimate is complex and characterized by high stability in time and space.

2. The thermal regime of spaces for speleotherapy is moderately cool.

3. The relative humidity regime is normal, similar to the free atmosphere.

4. The air currents have very low speeds or no air movement.

5. The barometric regime is correlated with variations of free air atmospheric pressure and with analysed depths.

6. The air ionization is differentiated, with concentrations, generally, higher than those of free nature and the electric polarity is close to unity, with favorable role for speleotherapeutic purposes”.

2. Myszkowska D., Kostrzon M., Zagórska M., Mikołajczyk M., Dyga W., Obtulowicz K., Kędzińska J., Czarnobilska E. (Poland)

A 3 year survey of bioaerosol monitoring in salt chambers in the ‘Wieliczka’ Salt Mine (Oral presentation, 15 min): “The low content of microorganisms in the air of salt chambers seems to be related to the biological material carrying in by patients and staff and makes the favourable environment for patients with inhalant allergy”.

3. MUNTEANU Constantin, MUNTEANU Diana, SIMIONCA Iuri, HOTETEU Mihai (Romania)

Speleotherapy and balneotherapy - experimental evaluation (Oral presentation, 15 min): “Our objective was to explore the effects of speleotherapy / balneotherapy on cellular morphology and physiology of pulmonary and dermal fibroblasts obtained from tissues of Wistar rats, in normal and Ovalbumin challenged, “asthmatic” conditions, or in wound induced conditions”.

“Animals of each lot were send to Cacica, Turda and Dej Salt Mine for 14 days and maintained in the salt mine medium, as in speleotherapy treatment”.

“Speleotherapy induces changes on the morphology and protein expression of pulmonary and dermal fibroblasts in vitro, and these changes - by comparing with Ovalbumin sensitized animals, supports the beneficial effects of Speleotherapy”.

SESSION III

“Alergology and pulmonary rehabilitation in speleotherapeutic centers; using the speleotherapeutic, physical, balneary and climatic factors for medical rehabilitation and prevention on patients

with chronic infection-inflammatory and allergic respiratory and cutaneous diseases and also for increase the quality of life”

Moderators:

1. PhD, MD., Ewa Czarnobilska - Head of Department of Clinical and Environmental Allergology, Chair of the Department of Toxicology and Environmental Diseases, Jagiellonian University Collegium Medicum; President of the Polish Society of Allergology in Malopolska, Krakow (Poland);

2. PhD, M.D., FCCP Neli Claudia Bilha, University Lecturer, University Stefan cel Mare Suceava; Primary care physician Pneumology, University and County Hospital; Advisor member of Working Group “Speleotherapy in salt mines and salt chambers” of PCS/CPS-UIS (Romania);

3. MSRII, Dr.(microbiol.), PhD, Pr.immunologist Iuri Simionca – President of PCS/CPS-UIS; National Institute of Rehabilitation, Physical Medicine and Balneoclimatology, Bucharest (Romania);

4. Dr., MD, Jozef Richter - SANATORIUM EDEL s.r.o., ZLATÉ HORY (Czech Republic);

5. PhD., MD. Vladimir Svozil- SANATORIUM EDEL s.r.o., ZLATÉ HORY (Czech Republic); PCS/CPS-UIS.

Presentations:

1. Krzysztof Czarnobilski, Krystyna Obtulowicz, Robert Szlęk, Brunon Lalik, Ewa Czarnobilska (Poland)

The effectiveness of subterranean therapy, a complementary climatic method in the treatment of allergic diseases (Oral presentation, 15 min): “The severity of airway inflammation was estimated using the concentration of nitric oxide (NO). Spirometry was performed underground on the first and last day.

Patients were also asked to answer a standardized symptoms score questionnaire on asthmatic manifestations. In 26 out of 35 patients there was a significant decrease in the NO concentration, on average by 36.5%, however a week later, the NO elimination recovered to the control values.

In 12 patients there was no change or an increase in NO concentration, but these patients had an additional infection of the upper respiratory tract or required additional betamimetics during the observation period.

In 28 patients, a significant increase in inspiratory capacity was seen, on average by 12%, but other static spirometry parameters did not change. However PEF increased in 18 patients, on average by 10.5%”. “These results suggest that subterranean therapy may be a helpful tool in the treatment of bronchial asthma and can diminish inflammatory processes in the airways”.

2. Iu.Simionca, M.Hoteteu, Ana Munteanu, C. Munteanu, Iuliana Rizea, Diana Munteanu, Neli Claudia Bilha, I.Ietcu, N.Tiganila, Elena Dumitrescu, O.Mera, L.Enache, M.R. Calin, N.Grudnicki, A.Iliuta (Romania)

The speleotherapeutic effect of salt mines underground environment with different curative properties for patients with infection-inflammatory and allergic respiratory diseases (Oral presentation, 15 min): “In the results of scientific research was found that the therapeutic effect of salt galleries is manifested by positive clinical evolution of chronic respiratory diseases, especially bronchial asthma, chronic bronchitis, infectious-inflammatory and allergic pathologies of upper respiratory tract, but also of skin.

In those patients positive changes occurring of some nonspecific resistance factors of the organism, inflammatory markers, sensitization to antigens, immunopathological processes and functions of adrenal glands”.

3. Neli Claudia Bilha, Iuri Simionca, Ioan Ietcu (Romania)

Some results and late clinical outcomes after speleotherapy in Cacica salt mine, Suceava, Romania (Poster, 5 min): “To analyze the clinical results during speleotherapy in the salt mine and the three-year longitudinal follow-up of patients after cure”.

”After 3 weeks of experimental cure in salt mine of Cacica, the patients had adapted at the subterranean climate, the symptomatology decreased or disappeared, the effort endurance improved, and there were no adverse effects”. “The 3-year follow-up revealed the persistence of the amelioration during 3-36 (mean 15) months”.

4. Neli-Claudia Bilha (Romania)

Medical Rehabilitation induces General Remodeling (Oral presentation, 15 min): “General Remodeling is a profound, holistic and qualitative concept.

The medical rehabilitation is one of the possibilities to renew the soul, the mind and the body of the patient.

Nowadays evidence-based medicine requires concrete data, thereby I propose a composite index that would help the study of the General Remodeling concept. It includes:

- a) initial and final evaluation of the patient,
- b) significant medical parameters,
- c) life-quality tests,
- d) profound personality and psychological tests,
- e) the interview and the self-evaluation of the patient”.

5. Svozil, V., Richter, J., Vetvicka, V., Rajnohová-Dobiášová, L., Král, V. (Czech Republic, USA)

Complex therapy (climatotherapy, speleotherapy, immunotherapy) in children with chronic respiratory problems (Oral presentation, 15 min): “Children are the most sensitive to environmental contaminants, mostly due to their higher ventilation, immature immune system and, compared to adult population, longer outside stay.

Environment pollution effect influences a higher sickness rate, a higher chance of respiratory infections and the rate of allergic diseases including asthma”.

“As we tried to gain better information about immune mechanisms taking place in selected population of children treated with speleotherapy and climatotherapy we evaluated a broad spectrum of parameters of specific and nonspecific immunity in two groups of children randomly assigned to groups which were blinded to intervention”.

“Our study was directed toward the evaluation of the effects of our complex therapy on some parameters of mucosal immunity, on important parameters of physical performance and improvements of quality of lung functions damaged by contaminated environment”.

6. Alice Azoicai, Nicolae Grudnicki, Margareta Grudnicki, Evelina Moraru (Romania)

The impact of the additional speleotherapy in children with cystic fibrosis (Poster, 5 min): “In children with cystic fibrosis who receive background dornase alfa treatment, additional speleotherapy improved personal perception on quality of life, and the evolution of respiratory damage, by decreasing the frequency and severity of infectious exacerbations”.

7. Magdalena Paciorek (Poland)

Rehabilitation of patients with chronic respiratory diseases using supplementary methods (Oral presentation, 15 min): “Rehabilitation Centre in Wieliczka treat patients using special therapy to achieve good results”.

“Rehabilitation activities include respiratory and general exercises as well as breath control training and bronchial cleansing procedures; the patients are also educated and have an opportunity to consult specialist physicians.

This, combined with inhalation of salt-containing aerosol and stability of climatic circumstances, is expected to result in improvement of the patients’ general condition, decrease of the number and severity of exacerbations, and reduced utilisation of emergency medicines, if applicable”.

“Rehabilitation in subterranean conditions may be a valuable supplementary treatment method in patients with chronic respiratory diseases. Patients who do not accept being underground (for example because of claustrophobia) are admitted for individual pulmonary rehabilitation program in base on surface”.

8. Kostrzon Magdalena, Czarnobilski Krzysztof, Czarnobilska Ewa (Poland)

The influence of pulmonary rehabilitation in the “Wieliczka” Salt Mine on asthma control – preliminary results (Oral presentation, 15 min): “This study evaluated the influence of subterraneo therapy on the result of asthma control test.

The result of asthma control test was compared with other conventional parameters including spirometry, PEF rate (PEFR), fractional exhaled nitric oxide (FeNO)”.

“The pulmonary rehabilitation program improves the quality of life and helps to control asthma in patients suffering from poorly or moderate controlled asthma.

The results should be confirmed through the study of bigger group of patients”.

9. B. Buleza, Y. Chonka (Ukraine)

The Effect of Speleotherapy on Individual Level of Humoral Immunity in Patients with Bronchial Asthma (Oral presentation, 10 min): “The course of treatment made 20 ± 2 days and included 17 sessions of speleotherapy (lasting 5 h) in the salt mine number 8 in Solotvino.

As a result of the treatment in all the patients positive dynamics of the main clinical symptoms and lung function were observed.

The number of eosinophils, total IgE, was significantly decreased. The number of Il4 was also decreased and Il12 was increased.

Dynamics of anti-inflammatory cytokines under the influence of treatment may be one of the mechanisms of general anti-inflammatory effect of speleotherapy in microclimate of salt mines for patients with asthma”.

In 25.10.2014 (Saturday), at the:

SESSION IV

“The development of halotherapy - therapy on the surface spaces with salt mine artificial environment and other descending methods of speleotherapy in salt mines”.

Moderators:

1. Prof., Dr., MD. Pavel Gorbenko – Advisor Member of Working Subgroup „Halotherapy (speleotherapy in artificial salt chambers)” of the PCS/CPS-UIS; Rector, „National Institute of Health”: Social Technopark, Sankt Petersburg (Russia);

2. PhD. Teresa Latour - Head of the Department of Health Resort Materials of the National Institute of Public Health, Warsaw (Poland);

3. PhD., MD. Yaroslav Chonka - Vice-President of the PCS/CPS-UIS; Chairman of PCS/CPS Working Group „Speleotherapy in salt mines and salt chambers”; General Director of Republican Allergological Hospital, Solotvino (Ukraine).

4. Prof. PhD., MD. Alina V. Cservinskaya – Institute of Respiratory Hygiene and Halotherapy (Budapest, Hungary).

5. MSRII, Dr. (microbiol.), PhD, Pr.immunologist Iuri Simionca – President of PCS/CPS-UIS; National Institute of Rehabilitation, Physical Medicine and Balneoclimatology, Bucharest (Romania).

Presentations:

1. P.Gorbenko, K. Gorbenko, V. Gorbenko (Russia, Ukraine)

30 Years of halotherapy. Health haloimprovement - New direction of halotherapy (Lecture, 15 min): “The concept of “Halocamera” - salt chamber, its technical and medical application as technology - treatment in artificial salt microclimate (Halotherapy) in the first of the world was introduced by us in 1984 (Author certificate 1225569 22.12., 1985)”.

“The basic principle of halotherapy lay in the technology of the speleotherapy in Solotvino speleotherapeutic hospitals with underground sections in salt mines, especially in Republican (Ukrainian) Allergy Hospital with Underground Section in Solotvino Salt Mine No 9)”.

“Private halochember provide effectively prophylaxis illness for all member of family and including the next course of health haloimprovement:

- Health haloimprovement – relaxations course; with often 1-3 sessions in the week.

- Health haloimprovement - prophylaxis course; often 2-3 course in the year and during and after longtime smog.

- Health haloimprovement – rehabilitation course after accomplish acute period of breathing system diseases.

- Health haloimprovement applicate for halorecreation, first and second prophylaxis, fitness, professional sport, pediatric, adults, geriatric and home practice”.

2. Teresa Latour (Poland)

Characteristics of salt aerosols and other factors used in different objects for aerosoltherapy (Oral presentation, 10 min): “The salt concentration in aerosol produced at graduation towers is labile and increases as the brine is concentrated, the content of iodide and (in case of direct sunlight) free iodine are its main characteristic.

Therefore, those dissimilarities justify the need for determining individual medical indications for the use of inhaled aerosol, produced in different objects, especially the duration and frequency of such treatments”.

3. Chonka Y., Sichka M., Sakalosh I., Trykur I. Buleza B. (Ukraine)

The Therapeutic Aerosol Environment in Halo-Aerosol Treatment Rooms of Ukrainian Allergic Hospital (Oral presentation, 10 min): “It’s worth to note also the dependence of aerosol concentration in rooms of aerosol therapy on the method of surface treatment facilities.

When processing surfaces with brine the concentration of salt increases compared to rooms where the surfaces are untreated with brine.

Thus, the obtained results suggest that artificially obtained rock salt aerosol retains its physical characteristics over time, which is essential to create the given treatment conditions”.

4. Alina V. Czervinskaya (Hungary, Russia)

Mechanism of Action and Possible Therapeutic Application of Controlled Halotherapy (Oral presentation, 15 min.): “The survey contains the data on clinical efficacy and a justification for halotherapy application for restorative treatment of patients with bronchopulmonary pathology, ENT pathology, dermatic diseases, concomitant cardiovascular pathology, as well as a method for the prevention of respiratory diseases”.

5. Leo M. Tonkin (USA)

The State of The Business of Salt Therapy (Oral presentation, 15 min): “This presentation will provide insight and value for all participants to better understand the economics of the research, health and commercial aspects of the Salt Therapy industry”.

6. Iu. Simionca, H. Lazarescu, M. Hoteteu, D. Dumitrascu, Ana Munteanu, Iuliana Rizea, A.Iliuta, Elena Dumitrescu (Romania)

Effect of cure in “Halotherapy Salon with Salt Mine Artificial Environment” on bronchial asthma patients but other chronic respiratory diseases (Oral presentation, 10 min): “Halotherapy method - descending from speleotherapy, initially consists in artificially recreating of some environmental parameters of salt mines

with speleotherapeutic properties.

Subsequently, halotherapy has completed by dry salt aerosol in different concentrations and dispersion - haloaerosoltherapy.

These methods have the origin from Solotvino (Transcarpathian Region, Ukraine) allergy hospitals with underground sections in salt mines, being afterwards the developed and improved in Uzhgorod Branch of the Odessa Research Institute of Balneology and Physiotherapy – currently Scientific-practical medical Centre “Rehabilitation” Health Ministry of Ukraine.

Later, have been proposed innovations, new improvements and technologies in different countries”. “Halotherapy cure including some stages specify to the underground salt mine Speleotherapy”.

SESSION V

”The developement of halotherapy - therapy on the surface spaces with salt mine artificial environment and other descending methods of speleotherapy in salt mines”.

Moderators:

1. PhD., MD. Yaroslav Chonka – Vice-President of PCS/CPS-UIS; Chairman of PCS/CPS Working Group “Speleotherapy in salt mines and salt chambers”; General Director of Republican Allergological Hospital, Solotvino (Ukraine);

2. PhD. Teresa Latour -Head of the Department of Health Resort Materials of the National Institute of Public Health, Warsaw (Poland);

3. PhD, M.D. Leon Danko - Director of Allergic Regional Hospital (Solotvino, Ukraine);

4. MSRII, Dr.(microbiol.), PhD, Pr.immunologist Iuri Simionca – President of PCS/CPS-UIS; National Institute of Rehabilitation, Physical Medicine and Balneoclimatology, Bucharest (Romania).

Presentations:

1. L. Danko, S. Danko (Ukraine)

Analysis of Reasons Aggravating the Course of Asthma. Gaining Control over Asthma Using Nebulizer and Artificial Aerosoltherapy (Oral presentation, 15 min): “Implementation of educational programs for patients allows to eliminate or significantly reduce effect of factors complicating bronchial asthma.

Prevention of seasonal viral infection - an important factor in the removal of exacerbations of asthma”.

“Use of artificial aerosol therapy can achieve the full degree of asthma control by correcting the basic treatment and improvement of the drainage function of bronchi. Combination of nebulizer and artificial aerosoltherapy provides significant positive

clinical effect in the treatment of mild exacerbations of asthma and achieves full control of the disease”.

2. Cristina Nica, Mihaela Bertescu, Ovidiu Mera, Nicolae Tiganila, Iu.(Gh.) Simionca, Rodica Rogoian, Gh Stoian (Romania)

New serum biomarkers for oxidative stress useful in bronchial asthma and halotherapy treatment monitoring (Poster, 5 min): “Our data shows that pathological processes involved in asthma imply an increased enzymatic activity of xanthine oxidase (28%), which correlates with increased levels of MDA (87.2%), total sialic acid (30%), carbonyl groups (80%) and decreased levels of thiol groups (37%), oxidized LDL (29.6%) and sialic acid conjugated with oxidized LDL (45.5%); after speleotherapy all values have tended to be normalized.

Based on this results we consider that our studied parameters can be successfully used in detection of bronchial asthma and monitoring the speleotherapeutic treatments in asthmatic patients”.

3. Chonka Y., Sokolov M., Buleza B. (Ukraine)

The Effectiveness of Halo-Aerosol Therapy in Children with Obstructive Bronchitis Treated in the SE “Ukrainian Allergic Hospital Ministry of Health”. Comparative Characteristics of the Efficiency of Treatment of Asthma by Speleotherapy and Halo-Aerosol Therapy (Oral presentation, 10 min): “To study the effectiveness of the treatment of children by halo-aerosol therapy in addition to clinic laboratory researches and respiratory function parameters testing, a special questionnaire to study treatment efficacy after repeated courses of treatment was worked out”.

“according to the research on the effectiveness of treatment by halo-aerosol therapy in children with obstructive bronchitis it is pointed out high efficiency of treatment which is generally higher than in patients with bronchial asthma”.

4. Chonka Y., Buleza B., Chonka K., Tyvodar G., Sokolov A., Major A. (Ukraine)

The Effectiveness of Halo-Aerosol Therapy in Adult Patients with Asthma (Oral presentation, 10 min): “After the first course of treatment 56.2% of patients noted improvement of the disease, in 31.3% remission lasted 3-6 months and 12.5% noted no improvement.

After the second course of halo-aerosol therapy 81.3% of the patients noted remission for one year and the lack of effect was noted only in 8% of the patients.

After re-treatment in 68.7% of patients the number of outpatient treatment was reduced and in 83.3% of patients the number of in-patient treatment

was reduced. Thus, halo-aerosol therapy has a very high efficiency in treating patients with asthma, and repeated courses enhance the effectiveness of treatment”.

6. Iuri Simionca (Romania)

Concerning some aspects of vision in the field of Speleotherapy and Halotherapy (Oral presentation, 10 min): “Analysis of activities in speleotherapy and halotherapy allow to justify the need to promote of some constants principles in the field”. “three clusters will be formed for the development of the partnership:

- Cluster for Speleotherapy and descending methods (Halotherapy) in Medicine;
- Innovative Partnership on Healthy Speleotherapy and of descending methods;
- Cluster for Health Speleotherapeutical Tourism and Recreation in salt mines, other mines and caves with curative properties, for halotherapy and other descending methods”.

7. P.P. Gorbenko, K. Gorbenko (Russia), A. Voskanian (Republic of Armenia), V.Gorbenko (Ukraine), V.Doskin (Russia), I.Lemko (Ukraine), Zinaida Makarova (Russia), Iu. Simionca (Romania), Galina Hiunninen (Russia), Y. Chonka (Ukraine)

Halotherapy in prophylaxis, therapy and rehabilitation (Proposal for international clinical recommendation) (Oral presentation, 10 min): “Are proposed the International clinical recommendations for halotherapy, which will indicate the conditions for halotherapy, requirements to halotherapy rooms and from materials used in construction, necessity for specialized medical personnel training, indications and contraindications.”

SESSION VI

”Closing of the XVth International Symposium of Speleotherapy. Proposals and discussion on the Closing Document of the XVth International Symposium of Speleotherapy, 2014, Wieliczka, Poland (XVth ISS)”

Honorary Moderators:

1. PhD., Eng.Kajetan d’Obyrn – Honorary Patronage of the XVth International Symposium of Speleotherapy, 2014, Wieliczka (Poland); Chairman of the Board the ‘Wieliczka’ Salt Mine Inc. (Poland);
2. Mrs. Sylvia Beamon – Privat – salisburyvillas.freeseerve.co.uk (united Kingdom).

Moderators:

1. MSRII, Dr.(microbiol.), PhD, Pr. immunologist Iuri Simionca – Chairman of International Scientific Com-

mittee at the XVth ICS & Organizing Committee of PCS/CPS-UIS for Organizing Committee of XVth ISS; President of the PCS/CPS-UIS; National Institute of Rehabilitation, Physical Medicine and Balneoclimatology, Bucharest (Romania).

Honorary Members of International Scientific Committee at the XVth ISS:

1. Prof., Ph.D., MD, Irena Ponikowska - President of Polish Association of Balneology and Physical Medicine; Consultant to the Minister of Health on Health Resort Medicine. Clinic of Balneology and Physical Medicine of the Medical University in Bydgoszcz (Poland);
2. Prof., Ph.D., MD, Svetozar Dluholucky - Honorary President of the PCS/CPS-UIS; Banska Bystrica Medicine University (Slovakia).
3. Prof., Dr., Ph.D., MD, Pavel P. Gorbenko - Advisor Member of Working Subgroup „Halotherapy (speleotherapy in artificial salt chambers)” of the PCS/CPS-UIS; Rector at „National Institute of Health”: Social Technopark; Member of the RANS, IAESMN & PASA; Sankt Petersburg (Russia).
4. PhD., MD. Yaroslav Chonka - Vice Chairman of International Scientific Committee at the XVth ICS & Organizing Committee of PCS/CPS-UIS for Organizing Committee of XVth ISS; Vice-President of the PCS/CPS-UIS and Chairman of PCS/CPS Working Group “Speleotherapy in salt mines and salt chambers”; General Director of Republican Allergological Hospital, Solotvino (Ukraine).
5. Ph.D., MD, Ewa Czarnobilska - Vice Chairman of International Scientific Committee at the XVth ICS; Head of Department of Clinical and Environmental Allergology, Chair of the Department of Toxicology and Environmental Diseases, Jagiellonian University Collegium Medicum, President of the Polish Society of Allergology in Malopolska, Krakow (Poland).
6. MSc. Eng. Marian Leśny – President of the “WIELICZKA” Salt Mine Organizing Committee for Organizing Committee of XVth ISS; President of the Board – the “Wieliczka” Salt Mine Tourist Route Sp. Z o.o (Poland).
7. MSc., Eng. ec. Jakub Czerwinski – Vice-President of the “WIELICZKA” Salt Mine Organizing Committee for Organizing Committee of XVth ISS; Advisor Member of Working Group “Speleotherapy in salt mines and salt chambers” of PCS/CPS-UIS; Director of “Wieliczka” Salt Mine Health Resort (Poland).
8. MSc. Magdalena Kostrzon - Responsible Secretary of the “WIELICZKA” Salt Mine Organizing Committee for Organizing Committee of XVth ISS; Advisor secretary of the PCS/CPS-UIS; “Wieliczka” Salt Mine Health Resort, Research and Development Authorized Official (Poland);
9. Ph.D., (Eng. Geol.), Ovidiu Mera - Responsible Secretary of the PCS/CPS-UIS; S.C. TURDA SALINA DURGĂU S.A., Turda (Romania);
10. Eng. Liviu Soare – Director of Salt Mine “Slănic Prahova”, SALROM SA (Romania);
11. SRIII, PhD., Constantin Munteanu - Advisor Secretary of PCS/CPS-UIS; President of Romanian Asso-

ciation of Balneology; National Institute of Rehabilitation, Physical Medicine and Balneoclimatology, Bucharest (Romania);

12. PhD., MD. Vladimir Svozil- Responsible Speleotherapy Repository / Library PCS/CPS-UIS; Sanatorium EDEL s.r.o. (Czech. Republic).

Presentations:

“Closing Document of the XVth International Symposium of Speleotherapy” – composed by Committees of “The XVth International Symposium of Speleotherapy” (XVth ISS) and representatives of Organizers; “The PCS/CPS-UIS”, “Wieliczka” Salt Mine Inc., “Wieliczka” Salt Mine Tourist Route, “Wieliczka” Salt Mine Health Resort, Department of Clinical and Environmental Allergology of Jagiellonian University Collegium Medicum, SP ZOZ MSW Hospital in Krakow, Krakow Saltworks Museum - the document was presented by:

- MSc. Magdalena Kostrzon (Poland) - Responsible Secretary of the “WIELICZKA” Salt Mine Organizing Committee for Organizing Committee of XVth ISS / Advisor secretary of the PCS/CPS-UIS;
- SRII, PhD., Constantin Munteanu (Romania) - Advisor Secretary of PCS/CPS-UIS.

There followed the discussion of document, proposals and decision.

Proposals and discussion on the Closing Document of the XVth International Symposium of Speleotherapy, 2014, Wieliczka, Poland (XVth ISS):

- MSRII, Dr.(microbiol.), PhD, Pr.immunologist Iuri Simionca – President of PCS/CPS-UIS (National Institute of Rehabilitation, Physical Medicine and Balneoclimatology, Bucharest , Romania);
- PhD., Eng.Kajetan d’Obyrn - ‘Wieliczka’ Salt Mine Inc.(Poland);
- Ass.Prof., PhD Liviu Enache – PCS/CPS-UIS (National Institute of Rehabilitation, Physical Medicine and Balneoclimatology, Bucharest, Romania);
- PhD., MD. Yaroslav Chonka - Vice-President of the PCS/CPS-UIS - Chairman of PCS/CPS Working Group, Speleotherapy in salt mines and salt chambers”(General Director of Republican Allergological Hospital, Sotolvino, Ukraine);
- PhD, M.D., FCCP Neli Claudia Bilha, University Lecturer, University Stefan cel Mare Suceava - Primary care physician Pneumology, University and County Hospital - Advisor member of Working Group “Speleotherapy in salt mines and salt chambers” of PCS/CPS-UIS (Romania);
- Eng. Liviu Soare – Director Salina Slanic Prahova, SALROM SA (Romania);
- MSc., Eng. ec. Jacub Czerwinski – Vice-President of the “WIELICZKA” Salt Mine Organizing Com-



Speleotherapy procedure In Salt Mine Wieliczka, Poland.

mittee for Organizing Committee of XVth ISS; Advisor Member of Working Group “Speleotherapy in salt mines and salt chambers” of PCS/CPS-UIS; Director of “Wieliczka” Salt Mine Health Resort (Poland);

- PhD., MD. Vladimir Svozil- Responsible Speleotherapy Repository/Library PCS/CPS-UIS; Sanatorium EDEL s.r.o. (Czech. Republic);
- PhD. Teresa Latour - Head of the Department of Health Resort Materials of the National Institute of Public Health, Warsaw (Poland);
- Leo M. Tonkin-Salt Therapy Association, United States of America; Dr. Eng. Michele Simili, Italkali SPA, Italia.

The decision on the Closing Document of the XVth ISS, 2014, 23-25 October, Wieliczka, Poland, was performed.

After the scientific sessions has been “Working meeting of PCS/CPS-UIS to which were discussed:

- Concerning of standards necessity for speleotherapy and halotherapy and also of specialists education.
- Perspectives of The PCS/CPS-UIS Bibliographic Bulletin.
- Regarding the content of the Statute and the seat of the International Association of Speleotherapy.

“Wieliczka” Salt Mine (Poland) Organizing Committee offered to the participants tours :

- Visiting the “Tourist Route of the “Wieliczka” Salt Mine and Health Resort Chambers” and also Krakow center.

Information on the XVth International Symposium of Speleotherapy are presented on the website:

<http://www.15speleotherapy Symposium.webgarden.com/>

<http://www.speleotherapycommission.webgarden.com/>



2014 ACCIDENTS REPORT

CAVE RESCUE COMMISSION

By Christian Dodelin (France), President
christian.dodelin@sfr.fr

ACCIDENT AU RIESENDING-SCHACHTHÖHL Allemagne

Accidents le 8 juin 2014 à 01h30.

Alerte reçue par Patrick Deriaz le 8 juin à 18h
Victime trauma crânien par chute de blocs. 12H pour
ressortir donner l'alerte. La victime est un allemand
qui travaille et séjourne en Suisse.

4 jours après l'accident un médecin est envoyé dans
la cavité. Auparavant un médecin a fait demi-tour à -400.

Seul les Suisses et les Autrichiens ont été offici-
ellement demandés en renfort. Les Italiens se sont
incrustés frisant l'incident diplomatique.

Tous les pays européens ont proposés des moyens
techniques et humains, l'Allemagne a tout refusé.

Les italiens finissent par avoir un accord officiel
au bout de 4 jours. Ils font venir quelques croates 2
jours plus tard.

QUELQUES CHIFFRES

Un accident qui se déroule à neuf cent quatre-
vingt mètres de profondeur et à trois kilomètres et
demi de l'entrée de la cavité.

Une distance d'environ mille cinq cents mètres
de l'entrée de la cavité jusqu'à la base des puits.

Une distance de deux mille mètres de progres-
sion semi-horizontale de la base des puits jusqu'au
point de l'accident.

Douze jours pour que la victime soit ra- menée à la surface:

- Quatre jours auront été nécessaires pour que
la victime voit enfin un médecin !

- Moins de deux jours pour effectuer son dépla-
cement horizontal depuis son point de médicalisation
à la base des puits,

- Plus de quatre jours pour remonter la victime
sur neuf cent vingt mètres de verticale ne présentant
aucune étroiture à élargir.

Sept cent vingt-huit personnels intervenus sur
l'opération selon le secours montagne allemand, soit
plus de deux cents personnels intervenus sous terre
sur l'opération, cent neuf Italiens, quarante-deux Au-
trichiens, vingt-sept Allemands, vingt-quatre Croates
et vingt Suisses engagés.

Un coût, indéfini...mais énoncé à plusieurs
millions d'euros,

1: Situation d'un pays n'ayant pas de compé-

tence en spéléo secours géré uniquement par les se-
cours en montagne

2: Absence des spéléos dans le dispositif secours.

3: Incompétence des autorités à gérer le se-
cours et refus d'aide extérieur

4: Risque pour la victime et les sauveteurs en-
gagés

5: Pléthore de personnels et moyens inappro-
priés et inutiles

6: Record de durée d'une intervention qui au-
rait pu se réaliser en moins de 8 jours avec une cen-
taine de sauveteurs.

CONSÉQUENCES ET ENSEIGNEMENTS

Le gouffre est fermé avec un accès interdit et
réglementé.

Les spéléos qui veulent explorer en Allemag-
ne doivent présenter et souscrire des garanties
d'assurances.

Une étude en France a montré que sans
l'implication des spéléos dans le secours nous aurions
à payer une assurance de plus de 1 000 euros par
personne.

Si les spéléos attendent la sollicitation de leur
Etat pour avoir une place dans le dispositif secours,
ils peuvent attendre longtemps. Les secours habituels
et officiels veulent occuper cette place malgré leur
incapacité dans ce type d'intervention.

Les spéléos et organisation spéléo doivent se
former pour une pratique sûre et apporter leur con-
cours en cas de secours.

Les spéléos selon leur compétence et expérien-
ce doivent être présents dans la gestion des secours.

Enfin les spéléos doivent trouver leur place
dans le dispositif secours de leur pays et faire respec-
ter cette place.

Cela commence par une pratique de la spéléo
en sécurité, continue par des formations en stage se-
cours spécialisés.

Un sauveteur professionnel coûte aussi cher
qu'une équipe de 30 spéléos volontaires.

ACCIDENT AU PÉROU EN 2014

La victime est de nationalité espagnole.

Les premiers secours sont venus des faibles
effectifs de spéléos péruviens, français et espagnols
présents dans le pays, transportés avec une logistique

militaire du pays.

Rapidement les militaires ont compris qu'ils n'avaient pas la compétence d'aller sous terre. Ils ont accepté l'appui des spéléos présents et l'envoi par l'Espagne de spéléos.

Les espagnols ont progressivement assuré le secours (médical et évacuation) et la logistique a été les moyens de transport habituels à leur frais et une solidarité des villageois et du milieu spéléo à l'international pour financer les frais réels.

Si la victime avait été péruvienne il est probable

que les renforts proposés par le Mexique et la FEALC, plus proche et aussi efficace auraient été acceptés. La pression de l'Etat espagnol pour un de ses ressortissants a orienté les moyens de secours.

Pour nous les efforts de formation pour les spéléos sont à poursuivre afin d'apporter la technique et la connaissance dans le domaine du secours en grotte.

De cela dépend notre libre pratique d'étude et de recherche spéléo.



Informatics Commission

HELP FOR BUILDING NEW CAVE/KARST DATABASES

By Peter Matthews (Australia), President
matthews@melbpc.org.au

Are you planning to build a new cave/karst database, or know of someone who is? Or upgrading an old one?

One of the UIS Informatics Commission's (UISIC) aims is to promote the interchangeability of cave and karst data, and to this end has already catalogued over 600 data fields for use in databases for caves and karst, and also for associated things like cave maps, areas/regions, bibliography, people and organizations. And the addition of further fields for caving, science or management is encouraged.

Not only does this give you a list of fields to choose from for your own database, it would help to ensure that your data was more interchangeable with others in the future (at an agreed level of detail of course), for the advance of speleology. And we are very happy to add new fields to the catalogue if you need them.

Where the values which a field can take on can be taken from a fixed vocabulary of choices, e.g. for fields such as rock type, owner type, contents, etc, UISIC's system has assigned numeric codes to each possible field value in the vocabulary so that they are spoken-language-independent. The data for these fields can then easily be displayed or printed in any language on-the-fly via translation tables. So far, we have field values in English, and many in German. More languages are planned. And extra field values can easily be added to the catalogue to cover further needs.

If you want to explore the possibilities for your

own database, or discuss the system, please do not hesitate to contact the Commission's President, Peter Matthews (see below).

Techo and language volunteers needed: To create new tools, easier working and to extend the system we are looking for computer-savvy volunteers, e.g. familiarity with any or all of Linux, PHP, Perl, MySQL, HTML & CSS, XML and associated, GIS, and so on. We are also looking for translators to translate the numeric coded values into further languages. And if you have a passion for cave and karst documentation, I am also looking for a Vice-President for the Commission to help promote and develop our work!

GrottoCenter collaboration

UIS is keen to collaborate with GrottoCenter, who operate a web-based global database for caves. Work on this collaboration will be starting soon. Part of the work will be UIS' requirement that we contact each country to ascertain what level of detail they are happy to display, so as to alleviate any conservation or other concerns.

UISIC Contact:

Please don't hesitate to contact me:

Peter Matthews

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Tel: +61 3 5263-1686, Mob: +61 3 0402 158 828.

Location: Melbourne, Australia

time zone UTC+10 (or +11 Daylight Savings Time).

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CAVE RECORD PROJECTS IN PORTUGAL



By Rodrigues, Paulo
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In Portugal cave records have been a controversial issue. Since several decades ago some speleo clubs have been building up their one record. But there is lacking national and interclub coordination to allow the sharing and the transmission to the next generations of cave location and cave maps. The lack of such a record as delayed for many years a proper exploration of Portuguese endokarst with caves being rediscovered and mapped over and over again.

In recent years two FPE (Portuguese Caving Federation) interclub projects, for cave recording, came to existence. Each project has its own geographical area of interest, conducting in each area a systematic exploration and cave mapping. The cave location, maps and sometimes genesis and geological settings are made public through internet publication, in specific sites and cave clubs sites. Both projects depend on the cooperation of cavers from several clubs, assuring by this way than cooperation and information sharing is maintained.

One project is named “Grupo de São Bento” (S. Bento Group) and has as the geographical area of interest the “Santo António plateau”, where the deepest Portuguese caves are found. This plateau is part of the Estremenho karst massif (MCE), the largest Portuguese karst area, located about 100km North of Lisbon. The group has an access controlled public cave record, about 300 caves large. This data base had meaningful contributions from some caver’s personal records, some clubs records and also from the compilation of records scattered in books and also French friends SSAC (Société Spéléo-Archéologique de Caussade) expedition records. This database is

being updated at least once a year.

Several of those caves have already published maps. Where there is no map the group explores and maps the cave. So far about 15 cave new maps have been releases and a few more are being prepared.

The other project is called: “Fora do Parque” (Outside the Park). This project has as an area of interest the Northern part of Estremenho karst massif (MCE), nearby the town of Ourém, about 140 km North of Lisbon. This area of MCE, to the contrary of most of MCE, isn’t under any protection status (therefore the projects name “outside the park” meaning outside the PNSAC (Natural Park) protected area.

This project has published so far about 20 cave maps, turning the attention to this “forgotten area”. Some of the most recent discoveries are quite exciting and promise even more discoveries for future explorations.

These projects information is available online.

One can find more information about the project Outside the park in the sites:

www.nalga.wordpress.com

www.lpn-espeleo.org/blogue/

One can find more information about the São Bento Group in the sites:

www.nalga.wordpress.com

<http://www.gem.pt/>

FPE, the Portuguese Caving Federation, has already a major database (“Cadastro” in Portuguese language), where the information can be uploaded to be available for all FPE cavers. www.fpe-espeleo.org.



ACTIVITY REPORT 2014

COMMISSION ON HISTORY OF SPELEOLOGY

By Bernard Chirol (France), President
bearchirol@orange.fr

DOCUMENTATION DEPARTMENT

Since the end of 2013 through 2014, the commission members were very busy in their countries. Contacts and cooperation was effective in European circles (F. Knolle, M. Laumanns, J. Mattes, P. Forti, D. St Pierre, B. Chirol) but also in South Africa (S. Craven) and Japan (Masayuki Fujikawa, Satoshi Goto), with special thanks to our Portuguese colleagues from their two societies for their documentation.

What must be developed is the construction of a common project. We think that the history of European speleology has been well studied. Recently, Johannes Mattes published a book in 2014 about Austrian caving history: **Reisen ins Unterirdische. Eine Kulturgeschichte der Höhlenforschung in Österreich** (written in German and sells for € 40). It is more than a simple history of speleology in Austria, Moravia, Bohemia, Hungary, and Slovenia, and provides a historical legitimization for our discipline from the Middle Ages to the 20th Century. The content of the book is based in the international development of speleology and karst research, and includes caves and cave research in England, France, Greece, and Italy.

Research is needed about the history of caving in the Near East. For that, we invite our colleagues from these west-Asian countries to help us reveal the influences on speleological knowledge, such as during the Middle-Ages or other periods.

Concerning single-rope techniques, French teams (led by Courbon, Gauchon, Chirol, and others) have led investigations for France that would be improved by American and Australian colleagues for non-European caves. The Orgnac Prehistory Museum (Ardèche, France) has presented an exposition about caving history, built with Françoise Prud'homme, that will be re-exhibited in 2015 with a special conference, in June, the 3rd.

Several communications in July 2014 focused on the INHIGEO-Conference (History of Earth Science) (California, attended by Mattes), and since November 2013 (Casola, Caluire, Divonne near Genève, attended by Chirol) on caving history. We suppose

many others also occurred. The best way to build commission projects is to meet each other during meetings in Postojna, Slovenia (June 2015) and Great Britain (Yorkshire 2016) before the International Congress of Speleology in Sydney, Australia (2017), and also to communicate a lot between these events. Subjects as those suggested above, but also original communications about local discoveries would be very interesting research topics. While we wait for new ideas, Dr. Johannes Mattes (Austria) proposes a symposium about caving history during the next European Speleo Forum in Ebensee, Austria (2018).

With Dr Friedhart Knolle, we visited the Harz Mts. which have many limestone, dolomite and gypsum caves. Caving tourism began probably around 1500. Dr Ralf Nielbock welcomed us at the famous archaeological cave Einhornhöhle which has a carved date from the 15th century and which had been visited by Goethe, Leibniz and other celebrities.

A French colleague told me that he was preparing a historical article about South America for the French magazine Spelunca. I have asked Russian caver Vladimir Akimov to serve as the commission's correspondent for Russia and his colleague Olga Kadetskaya, renowned specialist on Kungur Ice Cave, has offered to help us too. I must also thank Paolo Forti for his welcome in Bologna, Italy, and access to the rich Speleological Society of Italy library. I also appreciate the presentation of Nagel's book at the



Bernard Chirol (left) and Friedhart Knolle Harz. May 2014

Austrian National library in Vienna and meeting with Mattes at the national federation office.

For the moment, a synthetic work about caving in Cyprus has been covered since the end of 2013, which was followed up with a ground expedition in March 2014 and February 2015. After our first visit and meeting Dr Salih Gücel, a NGO for caving in the north was created in July 2014; we are confident that our activity will progressively develop alongside Dr Salih Gücel and with the help of an American biologist Lauren Satterfield in 2015. Since the 16th century, old book references about caves in Cyprus are few and far between. We are working on publishing all our results for Postojna meeting in June.

Jean Corbel was a European karstologist (1920-1970). I helped his family disperse his personal collections in France. His arctic equipment will go at IPEV (Brest, France) and his library to the Karst Resource Centre of Savoie University (C. Gauchon). S. Jaillet, also of Savoie University, has recently communicated to us the career of Monsieur Stanislas Meunier

who made experimental karst models in Paris around 1900. Also, while the French Federation of Speleology has a documentation center in Lyon, I have bought a complete series of Spelunca since 1951 to help with research.

Perhaps the most important historical work is currently being completed by José Ayrton Labegalini. His enormous work on the history of the UIS should be published and available for sale in June 2015 during the celebration of the UIS' 50th anniversary.

With the commission's network, we can give anyone who is interested in speleological history contacts for research. We wait for new colleagues interested in this subject to contact us. It is necessary for us to expand our European view of history and turn, for example, toward the American History Spelean Association, and many others.

Before closing, I want also pay a tribute to Professor Ivan Gams (1923-2014).



IN MEMORIAM

YAROSLAV CHONKA

Vice-President of UIS Permanent Commission on Speleotherapy (PCS)

Ukraine, 1950-2014

By Iuri Simionca, President of UIS Permanent Commission on Speleotherapy

simionca_iuri@yahoo.com

In December 29, 2014, at the age of 64 years passed away Ph.D., MD Yaroslav Chonka, Vice-President of "Permanent Commission on Speleotherapy/Commission Permanente de Spéléothérapie" of Union Internationale de Spéléologie/International Union of Speleology (PCS/CPS-UIS) and Manager/Chief Doctor of the State Institution "Ukrainian Alergological Hospital Ministry of Health of Ukraine" in Solotvino, Zakarpatie, Ukraine.

PCS/CPS-UIS expresses condolences to Doctor Yaroslav Chonka family and to those close.

Yaroslav Chonka was one of the promoters of speleotherapy in salt mines Solotvino from Ukraine and other countries, organizer and participant in national and international scientific forums, a good organizer in health, a doctor of value and a good hearted person offering help for those who needed.

Get some rest in peace Yaroslav, good soul, colleague and friend.



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Recent pictures of Yaroslav Chonka



IN MEMORIAM

BROTHER NICHOLAS SULLIVAN

UIS Vice President 1973-1977 and 1977-1981

EUA, 1927-2014

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 from the **NSS News**,
 January 2015, v. 73, n. 1.
<https://caves.org/pub/nssnews/>

The NSS has lost one of its most honored members, Brother G. Nicholas Sullivan, of Lincroft, NJ, who died peacefully of kidney failure after several days in hospice care on October 4, 2014, at the age of 86.

BACKGROUND AND ACCOMPLISHMENTS

Brother Nick, as he was widely known, was born Thomas Francis Sullivan in Philadelphia PA on December 20, 1927. He graduated from LaSalle College High School in 1945 when he also received the Religious Habit and the name Brother Gerardus Nicholas from the Christian Brothers teaching institute Fratres Scholarum Christianarum. He earned his Bachelor's degree in biology from Catholic University of America in 1950, a Masters in ecology from the University of Pittsburgh in 1954, and a Doctorate from the University of Notre Dame in biology in 1962. His PhD Dissertation, done in Cathedral Cave on Flint Ridge, was "Observations on the population dynamics of a cavernicolous ecosystem".

In 1962 he joined the Biology Department at La Salle University. Three years later, he started the school's Earth Science Program, which grew to include more than 20 majors. Among other things he led students for several years to Alaska to study the potential impacts of a proposed pipeline. He left La Salle in 1979 to join the faculty at Manhattan College, and later taught at St. Francis College in New York, retiring in 1994. He lived in Philadelphia until 2008, when he moved to Lincroft, NJ.

CAVES AND CAVING

Brother Nick (NSS 1403) was an Honorary Life Member, a Fellow, and President of the NSS 1958 -



Nicholas Sullivan, F.S.C.

1960. For his active involvement with the Philadelphia Grotto in the late 1950s and his many contributions of time and knowledge he was awarded Life Membership in the Grotto. He was also a Fellow of the Cave Research Foundation and a past President of the Explorers Club. One of his earliest undertakings was leadership of the 1955 cave dig at Cumberland Bone Cave.

Among cavers he is perhaps most remembered for his book, co-authored with George Moore, "Speleology: The Study of Caves", and "Speleology: Caves and the Cave Environment" which went through three edi-

tions (1964 Heath, 1967 Zephyrus, and 1997 Cave Books) and received a Science Book Club Award.

Brother Nick studied cave biota in 1600 caves in over 100 countries. He often traveled with his long-time friend and colleague Russell Gurnee who was also a past president of National Speleological Society and the Explorers Club. He was a world traveler and attended over 100 international speleological meetings. As a member and facilitator of The Explorers Club he often helped organize, fund, and lead expeditions in three parts of the world. Starting in the late 1950s and through the 1960s he worked with Russell and Jeanne Gurnee to explore caves in Puerto Rico, especially the Rio Camuy system.

The main research was summarized in 1968 in a paper by Gurnee, Thraillkill, and Nicholas in National Geographic Research Reports. In the mid 1960s Nick was part of two expeditions to remote Alta Verapaz of Guatemala which culminated in a television program, still shown on late night TV, called Riddles of Mayan Caves. His efforts since 1981 concentrated on the caves of Chillagoe, a rather remote area of northern Queensland, where he led 20 expeditions.

RECOLLECTIONS OF CHILLAGOE COLLEAGUES

It was a pleasure to be out with Brother Nick in

the field exploring caves. He began taking expeditions to the limestone caves at Chillagoe in the early 1980s, when the prevailing wisdom was that cave species did not exist in tropical caves, and particularly not in arid Australia. He quickly saw the potential for studies of cave species evolution in Chillagoe's archipelago of isolated limestone towers.

In 1984, with funding from the Explorer's Club, he invited Fred Stone and Frank Howarth, who had discovered abundant cave species in Hawaiian lava tubes, to search for cave insects. They quickly began to find cave-adapted species, notably planthoppers and cockroaches.

In 1985 their study was expanded to include the lava tubes at Undara. This made possible the discovery of the rich ecosystem of highly cave adapted species in Bayliss Cave, demonstrating that the continental tropics and arid Australia were not immune to cave species evolution.

It was Brother Nick's willingness to gamble on exploration of a relatively unknown area, and to convince the Explorer's Club to back him, that allowed the discoveries at Chillagoe and Undara to occur. Especially revealing was the array of related planthoppers from a series of isolated limestone towers covering the space of only tens of miles distance, which showed a gradation of eye loss from about half the size of the surface relative to only a tiny slit. Nick was memorialized by having one of these species named for him in 1989 by Hoch and Howarth: *Solonaima sullivanii*.

Nick was extremely keen to get biologists to work on the fascinating cave fauna of the Chillagoe and Undara areas. When Manfred Asche and Hannelore Hoch from Germany, who had been doing cave biology studies in Hawaii with Frank Howarth before, became interested in the Australian cave planthoppers, he found funding for them from the Explorer's Club so they could attend the 1989 Speleology Conference in Tinaroo, Queensland, and afterwards join his cave expedition to Chillagoe.

At that time, Manfred and Hannelore did not have a credit card, so it was impossible for them to buy the ticket and get reimbursed. Brother Nick solved the problem by driving himself through a snow storm to pay for their tickets from Germany to Brisbane at the airline office in Manhattan.

One of his many intriguing discoveries was that caves "move." This phenomenon was often observed during the Chillagoe cave expeditions. The caves in Chillagoe had all been tagged by members of the local caving club, and it often came as a surprise to find oneself in a completely different cave than had been

announced upon setting out!

Unfortunately one of his biggest dreams, the establishment of an active cave research center in the Chillagoe area, complete with laboratory, accommodation facilities and swimming-pool for relaxation after hard days of caving, was not fulfilled.

UP CLOSE AND PERSONAL

It is a rare privilege that men of Brother Nick's moral value and great talent become involved with and touch our lives in profound ways. He had a big heart and a great sense of humor. He treated everyone with respect and met people at eye level – be it children, students, renowned researchers, or even the Pope.

He was a true "people person" and always tried to help make things happen for others. He was a consummate facilitator and took great pleasure in assisting others in their research.

Nick was not averse to using his considerable charm and gift for persuasion in furthering his goals. A mutual friend knew another Nicholas Sullivan who worked for United Airlines. Brother Nick persuaded his namesake to let him use his free flight privileges. During the flight, a hostess who knew the "real" Nicholas Sullivan came by to talk to him, and was surprised at how different he looked. Brother Nick managed to convince her that he was indeed the United employee.

He was a man of this world – loved to laugh, enjoyed good food (he loved meat and hated vegetables) and cold beer. He was a gifted story-teller who loved the use of puns and acyrologia. He may have used the word cavernicolous rather than cave in his dissertation title since it sounds like caverNicholas. Nick always ended his letters with "carry-on" which sounds like "carrion."

Although he was a religious person, he never mentioned or even emphasized this part of his personality. When Tom Poulson asked him once whether his stiff clerical collar was uncomfortable, he smiled and winked. "Tom, I have learned to sleep with my eyes open and my stiff collar stops my head from wagging while I sleep in boring meetings." He lived his spirituality through his kindness.

Nick was a truly remarkable human being.
It was a great pleasure to have known him.

*Fred Stone, Tom Poulson, Hannelore Hoch,
Frank Howarth, and Amos Mincin*



Conference Report

INTERNATIONAL WORKSHOP ON ICE CAVES VI

Idaho Falls, Idaho, USA - 17-22 August 2014

By George Veni (USA)
UIS Vice-President of Administration
gveni@nckri.org

Photos by the author

The International Workshop on Ice Caves (IWIC) is a series of workshops devoted entirely to ice cave research. IWIC is the only conference focused on state-of-the-art ice cave research, where international experts discuss ongoing research efforts and promote global cooperation in ice cave science and management. IWIC is a conference of the UIS Glacier, Firn, and Ice Caves Commission.

IWIC-VI was the first IWIC held outside of Europe. It occurred in Idaho Falls, Idaho, USA from 17-22 August 2014, and was hosted by the National Cave and Karst Research Institute (NCKRI) of the USA. IWIC-VI was attended by 32 people from 11 countries.

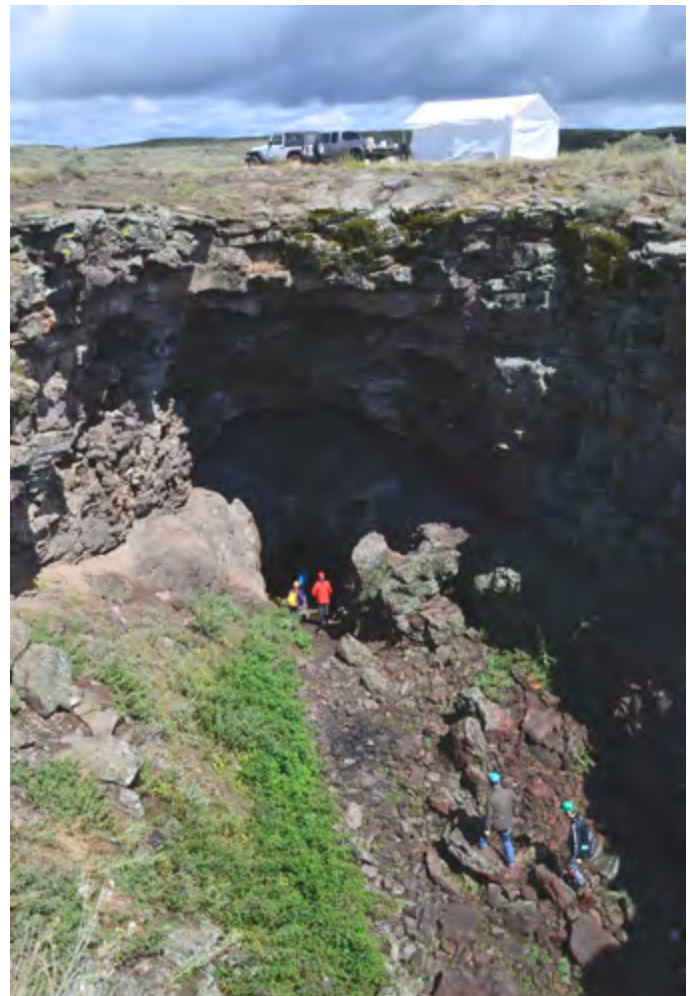
They presented 20 papers and abstracts that cover ice caves and glacier caves in eight countries, three continents, and some extraterrestrial bodies. The 97-page proceedings were digitally published and distributed.

They have been posted on the NCKRI website for free international sharing of the knowledge at http://nckri.org/about_nckri/nckri_publications.htm (look under the “Symposia and Special Papers” menu bar).

The topics of the paper include modeling, measuring, and monitoring of ice and glacier cave processes, microclimates, and cave ice, as well as the effects of climate change.

The meeting had additional activities that include:

- Special evening video on the Sandy Glacier glacier caves in Oregon, USA.
- Special evening lecture on new major ice cave discoveries in Canada.
- Meeting on organizing an international ice cave sampling project before much more ice is lost to climate change.
- Meeting of the Glacier, Firn, and Ice Caves Commission.
- Banquet presentation on IWIC-VII, which should be an excellent meeting and is scheduled for



CRYSTAL FALLS: Speleologists enter Crystal Falls Ice Cave. The tent above is where a hot delicious lunch was prepared and served.

Postojna, Slovenia in 2016.

Following two days of presentations, IWIC-VI had two days of field trips. The first day was in the King’s Bowl area at the south end of Craters of the Moon National Monument where everyone divided into three groups to use ropes to enter one of two volcanic rock ice caves, or examine related geologic features on the surface without technical equipment, depending on their interests.

Members of the Silver Sage Grotto of the US National Speleological Society very kindly provided equipment and technical assistance.

The second day was at Crystal Falls Ice Cave, a lava tube cave divided into two parts by ice blockage. Melting of some ice made the visits colder and wetter than expected. Ice was also found in a nearby smaller lava tube, Worm Hole.

Afterward, everyone played on the St. Anthony Sand Dunes.

Two optional field trips were planned for the final day of IWIC-VI, to the north end of Craters of the Moon and to Fossil Mountain Ice Cave.



ICE LINE: Speleologists examine a white line in Beauty Cave. This line was possibly created by ice that has now melted.

Unfortunately, bad weather in the mountains made it unsafe to visit Fossil Mountain and so most went to Craters of the Moon and looked at several small lava tube caves, including one with ice.

One of the purposes of IWIC-VI was to look at the differences in ice development between lava and limestone caves. Three members of the group decided to visit the town and resort of Lava Hot Springs.

In the end, everyone was very happy with IWIC-VI and many new friendships and connections made. Continuing collaborations and new projects are planned, and many are already planning to go to IWIC-VII in Slovenia in 2016!



MELTED ICE: Speleologists wading through icy water after visiting ice in Crystal Falls Ice Cave.



IWIC-VI participants at the entrance of Crystal Ice Cave.

Congress Report

1st CONGRESS ON ROMAN MINING

Valongo, Porto, Portugal - 8-9 November 2014

By João Moutinho (Portugal)
jnm@fe.up.pt

Photos by Valdemar Freitas



During the 8 and 9 November 2014 the city of Valongo, Porto, Portugal, was the venue of the 1st Congress on Roman Mining.

The organization of the event was in charge of the “Alto Relevo Clube de Montanhismo-ARCM” (High Relief Mountaineering Club), a Portuguese mountain sports association with more than 500 members that has special focus on Speleology and is affiliated with the Portuguese Federation of Speleology-FPE for several years.

During the event, hundreds of people had the possibility to meet the largest underground Ancient Roman Mining complex in the world. It is located in Valongo, Portugal (Northeast of Porto town) and is one of the best well kept secrets in this knowledge area.

Through either a vast number of oral communications or with guided field visits, the participants became aware of the significance of such well-preserved remains of the Roman Empire influence in such

an important matter as the gold exploration.

It is another great monument that was left behind by this great civilization, and Valongo has the privilege and the responsibility of preserving it while studying it.

One of the events of this initiative was the International Cavers encounter, which showed to this community the speleological importance of patrimony.

Everybody was delighted and, at the end of the event, left away with a “need to come back” feeling. There was also a caving photo exhibition, showing a significant number of very beautiful portraits of this particular underground world.

In this event was also released a documentary produced by the ARCM. Entitled “Mineração Romana em Valongo” (Roman Mining in Valongo), it can be seen (in Portuguese language) on the ARCM website www.altorelevo.org as well as on the Speleo

TV website <http://speleo-tv.eu/2014/12/12/roman-gold-mining-in-valongo-porto-portugal-p> (English translation is still pending).

The Congress of Roman Mining has been endorsed by the Portuguese Federation of Speleology (FPE). Field works are still being carried out, at surface and underground, and odds are that there will be a new edition, maybe in 2015, to present new findings.

The international speleological community will be informed about it.



Oral presentation Sessions

More images of the 1st Congress on Roman Mining - Valongo, Portugal



Question and answer period between audience and the several presenters



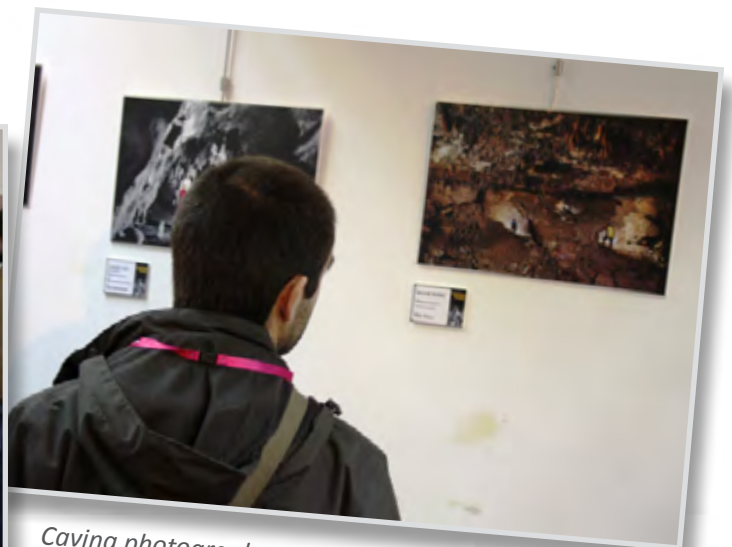
Guided field visits to the Roman Mining complex



Guided field visits to the Roman Mining complex



Caving photography exhibition



Caving photography exhibition

ESPELEO TURISMO INCLUSIVO

Por Mónica Ponce (Mexico)

espeleocoahuila@gmail.com



Mónica Ponce (Mexico)

Tras casi 14 años desde que me inicié en la espeleología, he visto innumerables actividades para dar a conocer y proteger el patrimonio subterráneo de la actividad turística. Sin embargo, cada explorador de alguna manera impacta el medio ambiente al incursionar, realizar estudios en alguna exploración, expedición en una cueva.

He tenido que aprender que los espeleólogos no somos los dueños de las grutas, cavernas y cuevas, ni tampoco del conocimiento generado a través del tiempo; sin embargo, nos vemos muchas veces confrontados con la idea de difundir el conocimiento sobre lugares frágiles y vulnerables al impacto humano “Conocer para Conservar” (Ponce, 2005); pero, de no hacerlo, estamos dejando abiertas las puertas a saqueadores y coleccionistas de cristales que dinamitan y destruyen las formaciones en una cavidad.

“La obra divulgativa es una contribución imprescindible para el conocimiento y que sólo el conocimiento puede de alguna manera garantizar la conservación” (Bernabei, 2006, pp. 41-44).

Por lo anterior, el desarrollo de proyectos ecoturísticos diseñados por espeleólogos, tour operadores y guías empezó a crecer alrededor del mundo invitando al público en general “a conocer para entender y entender para conservar” (Bernabei, 2006) haciendo cada vez más accesibles las cuevas para un

disfrute personal, profesional y deportivo. Sin embargo, no todos tienen acceso a las cuevas, algunas personas con capacidades diferentes se han privado de conocer estas maravillas.

En México a pesar de que hace más de una década se decretó la inclusión de personas con alguna limitación física o mental en toda actividad social, cultural, deportiva y turística, es fecha que las políticas públicas no incluyen lineamientos que se respeten para ser incluidas específicamente en cualquier actividad.

Al cabo de cinco años he destinado parte de mi tiempo a conocer más sobre el turismo de aventura en cuevas a tal grado de convertirme en guía de turistas y tour operador de mi estado Coahuila. Sin embargo, no había contemplado la posibilidad de ofrecer turismo inclusivo, hasta que participe en el Congreso Mundial de la Red Nacional para la Prevención de la Discapacidad (RENAPRED) y vi la importancia de ver a las personas con capacidades diferentes como cualquier turista.

A partir de ahí, inicié mi interés por desarrollar la posibilidad de realizar un Congreso en mi país que cumpliera con todas las características necesarias para llevar a cabo dicho evento al que denomine: “Primer Congreso Internacional de EspeleoTurismo Inclusivo en México” proyecto que quiero desarrollar como tema de mi maestría y si todo sale bien, en tres años estaré cumpliendo mi meta.

Pero... ¿Cómo podría iniciar?... ofrecí una conferencia en el marco de la celebración del congreso de RENAPRED sobre la Espeleología en México y el Mundo y establecí parámetros y contactos... e inicié con una lluvia de ideas, ¿Qué necesito para meter una silla de ruedas a una cueva?, ¿Qué tipo de infraestructura requiero para adaptar una cueva?, ¿Qué necesidades específicas se requiere que aprendan los guías?, ¿Realmente una persona con necesidad pagaría por un viaje a una cueva? ¿Habría este tipo de actividad en México?, ¿Dónde se puede realizar esto?

Según nuestros instructores, las personas se sienten excluidas de toda actividad social, cultural y deportiva; pero, cuando se les enseña a que pueden ser independientes no van a parar para experimentar lo que una cavidad le puede otorgar.

Debía ponerme entonces en el lugar de una persona en silla de ruedas, para poder identificar que necesitan. “Y... como aprendí”. Desde subir una sim-

ple banqueta de 10 centímetros, levantar la silla para colocar las llantas al frente y después impulsarte para subir... ¡Como batalle, para no perder el equilibrio!, además, subir una rampa de más de 45 grados, ¡Que relajo! Difícil sostener el peso de tu cuerpo, el de la silla y las condiciones físicas de la rampa; pero, no imposible, al cabo de unos 10 minutos, sosteniendo rodada a rodada, logré subir la rampa... y ni de chiste baje las escaleras, así que regrese por la rampa, (uno pensando que puede bajar como andar en patineta); no es así... hay que sostener tu peso y el de la silla y bajar suavemente, de lo contrario, puedes perder el equilibrio y caer.

Primero hay que conocer sus necesidades para luego, saber como tratarlo. Iniciando mi interés por desarrollar un proyecto denominado “Espeleo-Turismo Inclusivo” donde las personas con alguna discapacidad, pudieran experimentar por si mismos, lo que se siente explorar una cueva, y me comprometí a desarrollar un congreso de turismo inclusivo en cuevas de México.

Ahora bien, surgieron preguntas como ¿Cuántas personas se podrían beneficiar de estos servicios turísticos?

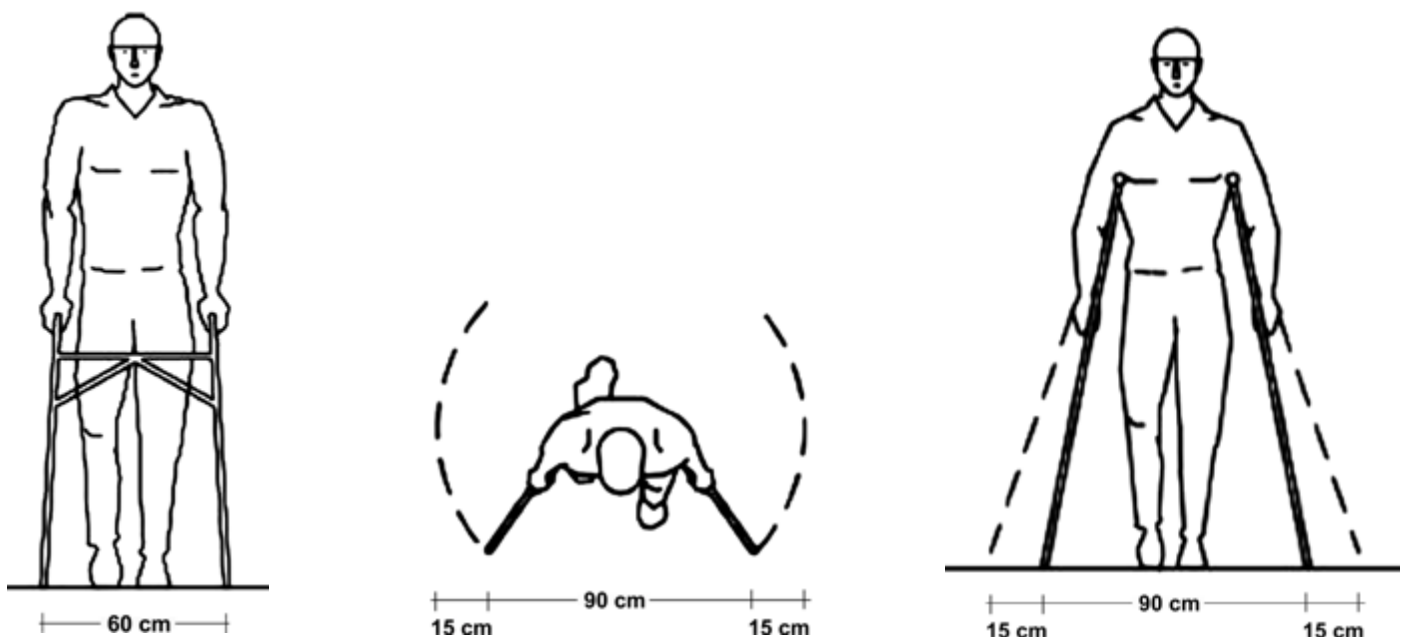
Si tomáramos en cuenta los cambios pronosticados por la Organización Mundial de la Salud que considera que para el 2050 el 21% de la población mundial [2 millones de personas] tendrá 60 años y el 35 % de las personas con más de 65 años tendrán una discapacidad o limitación asociada. Ello significa que el mercado potencial está en personas con discapacidad que no suelen viajar solas, siempre van

acompañados de algún familiar o amigos.

Entonces surgieron una infinidad de preguntas y directrices para poder realizar este congreso: ¿Qué tan accesibles deben de ser las cuevas?, ¿Cuáles son las medidas exactas para mejorar la accesibilidad a las cuevas?, ¿Cómo se puede desarrollar un circuito sin impactarlas?, ¿Podremos bajar personas en cuevas verticales?, ¿Podremos desplazar a personas en cuevas horizontales? ¿Qué cuevas en México se pueden adaptar para dar servicio de turismo para todos?, ¿Se podrá incluir a los adultos mayores? ¿Se podrán adaptar y crear nuevos equipos para tener una mayor accesibilidad en cuevas ya turísticas o cavidades naturales?, ¿Cuáles son las necesidades básicas de las personas con capacidades diferentes?, ¿Cuáles son los retos logísticos para desarrollarlo?, ¿Qué deben aprender los guías del turismo espeleológico, ¿Cómo sortear los obstáculos naturales?, ¿Qué tipo de paquetes de cuevas se requieren?, etc.

Beneficiando así no solo a personas con discapacidad, sino a todas aquellas que tienen limitada su movilidad por razones temporales o permanentes: ancianos, padres con cochecito de bebe, personas obesas, mujeres en alcanzado estado de gestación, personas con bultos o maletas.

En Saltillo, logré contactar a la Arq. Griselda Salas, quien ya trabaja su tesis de maestría sobre el desarrollo de espacios adecuados para la gerontología [que incluye a los adultos mayores y personas con disminución motriz]; ella me proporciono una copia de las Recomendaciones de Accesibilidad del gobierno federal que contiene “las recomendaciones



ANTROPOMETRÍA: Cuando se diseña y contruye los espacios pensando en las personas con discapacidad, se logran entornos accesibles para todos (Recomendaciones de Accesibilidad, 2007, pp. 11-A01 - <http://discapacidad.presidencia.gob.mx>)

desarrolladas para edificar ciudades e inmuebles con un estándar muy alto de funcionalidad, calidad y estética, en el cual todo ser humano sea capaz de asistir, acceder y gozar del espacio.” (Discapacidad, 2007) mismas que se basan en la arquitectura y el urbanismo de los escenarios en función de los usuarios, conciliando todos los requerimientos que esto implica con fundamento en la antropometría; cuando se diseña en base a personas con discapacidad, se logran entornos accesibles para todos.

Así mismo, y gracias a Efraín Mercado, Presidente de la Federación Espeleológica de América Latina y el Caribe (FEALC), pude contactarme con Teresa Aragão, Profesora y Doctora en Ciencias de Sophia-Antipoulis Educación, miembro de la Sociedad Brasileña de Espeleología (SBE). Ella descubrió la espeleología inclusiva al sur de Francia mientras estudiaba su doctorado, gracias a una salida a cueva

realizada por Handicap Aventure de Christian Starck, pionero de esta actividad.

Poco tiempo después la Dra. Aragão conoce a la Bióloga brasileña Érica Nunes, quien dirige la Comisión de Espeleo-Inclusión en la SBE. Ambas han trabajado en la Comisión de Espeleología Inclusiva desarrollando una serie de experiencias dentro de cuevas generando así dos interesantes artículos sobre Espeleo-Turismo Adaptado y “INCLUSÃO SOCIAL DE PORTADORES DE NECESSIDADES ESPECIAIS (PNEs) E A PRÁTICA DO TURISMO EM ÁREAS NATURAIS: Avaliação de seis cavidades turísticas do Estado de São Paulo”.

Actividades que han arrojado datos interesantes para la estandarización de infraestructura, capacitación y logística en ambientes impredecibles. Anticipando los elementos de riesgo a considerar con posibles obstáculos naturales, así mismo, como la

Actividades de espeleo-inclusión celebradas en distintas cuevas de Brasil por la Comisión de Espeleo-Inclusión de la Sociedad Brasileña de Espeleología-SBE



Gruta da Beleza - São Desidério, Minas Gerais, Brasil



Gruta Morro Preto - Iporanga, São Paulo, Brasil



Caverna do Diabolo - Eldorado, São Paulo, Brasil



Gruta Colorida - Iporanga, São Paulo, Brasil

actividad implica riesgos que las personas con discapacidad tienen derecho a decidir si quieren enfrentarse a ellos o no y estar bien informados sobre la legislación de la accesibilidad en el entorno que decidan realizar su actividad (Nunes, 2006).

En México la legislación sobre la accesibilidad está un poco olvidada y requiere homologar normas estatales y municipales, así como estándares de calidad. La reglamentación más completa sobre la accesibilidad está establecida en la NOM 030 SSA3 2013 que solo compete a los hospitales del país; la accesibilidad es un concepto que evoluciona.

Concuerdo con la comisión brasileña de espeleología adaptada, que se debe continuar con el estudio y desarrollo de técnicas de accesibilidad de las cuevas donde se pueda experimentar y evaluar las facilidades y dificultades de las cavernas con posibilidad de recibir a personas con capacidades diferentes.

El diseño de nuevos estándares, normas y legislaciones aunado a la capacitación adecuada de guías y monitores del espeleo-turismo en México, permitirá ampliar el conocimiento para futuros exploradores y romper los paradigmas de adaptaciones peligrosas y recorridos imposibles.

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Union Internationale
de Spéléologie
www.uis-speleo.org

MINUTES UIS BUREAU MEETING

October 31 – November 1, 2014
Sydney, New South Wales, Australia

By George VENI, Vice-President of Administration (*acting Secretary for the Minutes*)
gveni@nckri.org

SESSION 1

Friday, October 31, 2014; 09:00-13:40 (local time)

Attendance

President: Kyung Sik WOO

Vice-President of Administration: George VENI
(*acting Secretary for the Minutes*)

Vice-President of Operations: Efrain MERCADO

Adjunct Secretaries:

Giovanni BADINO (partial attendance by Skype)

Jean-Pierre BARTHOLEYNS

Nivaldo COLZATO

Christian DODELIN

Mladen GARAŠIĆ

Zdeněk MOTYČKA

Nadja ZUPAN HAJNA

Honorary members/Past-Presidents:

Andrew James EAVIS

José Ayrton LABEGALINI

Bureau members not in attendance:

Fadi NADER

Guests: Nicholas WHITE

1) Opening comments of the UIS President/ Approval of the Agenda

Kyung Sik Woo thanked all participants for coming to Sydney. He discussed the outcome of the Executive Committee meeting the day before that refined the Bureau meeting agenda.

2) Approval of Minutes from the 2013 Bureau Meeting (Brno, Czech Republic)

A few minor misspellings and corrections in English were made in the minutes of the 2013 UIS Bureau Meeting by George Veni. The revised minutes were approved by consensus.

3) Review of Action Items and Decisions of previous UIS Bureau Meeting (2013)

a. Christian Dodelin explained the situation with canyoning in the FFS proposal to conduct that activity within the UIS. The situation has since changed and it is clear there is overlap between canyoning and caving, but the two activities are separate and the organizations should remain separate.

b. Speleo Nederland had a similar proposal to include caving under the Sportaccord organization so speleological organizations could receive insurance through Sportaccord. After reviewing the requirements for Sportaccord membership, membership requires that organizations are about competitive sports and UIS does view speleology as a competitive sport.

ACTION 1: Fadi Nader will send a letter to Speleo Nederland to explain why UIS cannot be a member of Sportaccord.

4) Review/approval of an Invited Bureau Adjunct Secretary from Australia to fill the remainder of Stan Flavel's term

Nicholas White was present at the meeting to represent Australia and explained that the Australian Speleological Federation will meet in two days and decide who they will recommend to fill Flavel's position. White prefers that he not serve as a Bureau member due to other obligations.

5) Review of Finances (Nadja ZUPAN HAJNA)

a. Summary of past year and current status:

The report is below. Some member countries, including new countries, have not yet paid.

UIS Financial report for 2014 until October 14, 2014

EUROS 2015			
1.1.2014	12.047,90		10.000,00 deposit till 7.4.2014
	22.047,90	49,98	interest
		20.000,00	NEW deposit from 11.4. 2014 until 13.4. 2015 – taken from account
		148,86	interest
	Income until 14.10.2014		
	fees	2.920,00	
	other	6.839,53	
	interests	0,63	
	Interest EUR deposit	198,84	
		9.959,00 + 2.047,90	12.006,90
	bank fees		112,96
	commissions		1.225,00
	other		1.186,13
			2.524,09
	TOTAL:	9.482,81	and 20.000,00 deposited!
USD 2014			
		30.000,00	deposited until 7.4.2014
income	payment	39,46	interest
225,26	150		
	TOTAL:	16.929,86	30.000,00 deposited from 11.4. 2014 until 13.4. 2015 - taken from account
		55,73	interest

b. Status of sales of Cave Geology in Spanish as translated and printed by the Cuban Speleological Society (N. Zupan Hajna): The books are available on Amazon.com but so far only one copy has sold. We need ideas on how to sell more; 250 copies remain in Slovenia.

UIS loaned 5000 Euros for the printing of the book to be repaid with the sales.

ACTION 2: Efrain Mercado will promote the book through FEALC and take copies back to Latin America from the 2015 Bureau meeting. Jean-Pierre Bartholeyns will advertise the availability of the book on Amazon.

c. Internet payment (E. Mercado): The completion of the transition of the UIS website to the NSS server should

be complete within a week. When completed, it will give more ability for the UIS website to do more things. The cost is US\$150.00/year and will be paid automatically.

DECISION 1: The UIS will pay the NSS US\$150/year automatically for use of its server for the UIS website. Efrain Mercado will coordinate with the NSS and Nadja Zupan Hajna will make the payment.

d. Request by Hungary for reduced dues (N. Zupan Hajna): The number of Hungarian cavers has dropped in half and with national financial problems they are asking to be changed from Category A to Category C to reduce their dues from 300 to 50 Euros/per year. They are willing to return to a higher category when their situation improves.

DECISION 2: The UIS will accept the Hungarian Speleological Society's proposal to reduce their dues to 50 Euros/year retroactively to 2011 as Category 3. Fadi Nader will notify them.

e. Request for funds by the commissions (G. Veni):

The following requests were made by the commissions:

- **Bibliography Commission:** 500 Euros each year until 2017 for the coordination of Speleological Abstracts.
- **Department of Protection:** 250 Euros each year until 2017 to support the Habe Prize.
- **Pseudokarst Commission:** 100 Euros to print the next edition of the commission's newsletter and any "extra" funds to support the travel of honorary commission members to the commission's symposium.
- **Speleotherapy Commission:** 250 Euros in 2014 and 2016 for translating the proceedings of the 15th and 16th symposia, and 150 Euros in 2014, 2015, and 2016 to print the Bibliographic Bulletin of Speleotherapy.

DECISION 3: All commission requests for funding were approved except for the "extra" money by the Pseudokarst Commission and that printing costs will only be paid for one year, after which all commissions will be encouraged to publish electronically on their websites and the Karst Information Portal. George Veni will notify the commissions and Nadja Zupan Hajna will send payments. Zdeněk Motyčka will assist the Pseudokarst Commission with extra money.

f. Discussion to possibly develop grants for exploration (N. Zupan Hajna): Proposal for grants for members to support exploration among members countries, not to non-member countries. Discussed before the meeting with Fadi Nader and up to 1000 Euros in support was suggested. There was general support for the idea but also discussion of many complexities.

ACTION 3: Zdeněk Motyčka will organize a committee to study how to develop a grant program to support expeditions and projects.

g. Determine how to recognize member countries on the UIS website (N. Zupan Hajna): The UIS website lists all organizations and members on one list and the members need to be distinguished.

ACTION 4: Efrain Mercado will differentiate between the members and non-members on the website. José Labegalini will assist.

6) Status of review and modification of the UIS Statutes and Internal regulations (G. Veni)

Both documents have been closely reviewed and modified. Most of the proposed changes are very small, such as correcting English and typographical errors, reformatting some information to make it clearer and easier to find, and using consistent terminology. More significant changes include making the documents consistent with each other, removing actions and practices that are no longer true of the UIS and replacing them with current actions and practices, adding procedures to remove Bureau members, delegates, and member nations, and removing detailed procedures from the Internal Regulations and placing them into their own documents (as currently done with the Congress guidelines). The next steps are to:

- a. check key points with a Slovenian lawyer and make sure everything is legal and proper by Slovenian law;
- b. add a preamble to the Statutes as required by Slovenian law;
- c. add a responsible person in Slovenia as required by Slovenian law;
- d. add more power to the Advisory Committee as required by Slovenia law;
- e. possibly develop a Conflict of Interest Policy and Bureau Ethics Policy.

ACTION 5: Nadja Zupan Hajna will consult with a Slovenian lawyer to work out the next steps on the Statutes and Internal Regulation by the end of 2014. Fadi Nader and George Veni will then make any remaining changes and send the document to the Bureau for review.

7) Procedure for applying for UIS Bureau (J.-P. Bartholeyns)

Jean-Pierre Bartholeyns noticed some slowness and inefficiency in the posting of candidates and information about the candidates running for the UIS Bureau. He proposed using a standard form that is completed by the candidates to provide information about themselves.

ACTION 6: Jean-Pierre Bartholeyns will work with others to revise his proposal by the end of April 2015 for collecting and posting information on candidates running for the UIS Bureau.

8) 50th Anniversary of the UIS (N. Zupan Hajna)

Nadja Zupan Hajna reviewed the draft schedule and the proposed costs (as follow). She and Andrej Mihevc are the organizers.

	June 15	June 16	June 17	June 18	June 19	June 20	June 21
	MON	TUE	WED	THU	FRI	SAT	SUN
Morning	-Registration -Opening of event CAVE SCIENCE -Invited lectures -Lectures of participants	OPEN EXPLORATION FRONTIERS; BIG CAVE SYSTEMS -Invited lectures -Lectures of participants	HISTORY OF CAVE EXPLORATION IN CENTRAL EUROPE – »ALCADI« -Invited lectures -Lectures of participants	Whole-day field trip Classical Karst: <u>Škocjanske jame</u> UNESCO, cave entrances to underground river <u>Reka</u> , <u>Grotta Gigante</u> springs of <u>Timava</u>	UIS DAY - Invited lectures - Visit of <u>Postojnska jama</u> cave	UIS Bureau meeting Cave visits (organized by JZS)	UIS Bureau meeting
Afternoon/evening	- Lectures of participants - Poster session - Karst mysteries -Institute reception	-Field trip: cave <u>Planinska jama</u> , <u>Rakov Škocjan</u> , <u>Cerkniško polje</u> (entrance to cave <u>Karlovice</u>)	-Field trip: cave <u>Vilenica</u>		- 50 th Anniversary of UIS; celebration in the cave <u>Postojnska jama</u> - Reception in front of the cave	UIS Bureau meeting	

Nadja proposed:

1. Registration for International Karstological School and UIS Day:

- Whole week = 150 Euros/person; students 50 Euros/student

- UIS Day (Friday) = 50 Euros/person

- UIS Bureau members: 150 Euros or 100 Euros or 0 Euros (depending on if pays some of the expenses)

Included: materials, coffee breaks, reception, excursions, lunch during whole-day excursion, cave visits, celebration, banquet.

2. Accommodations– discount in negotiation

Due to other sponsorships, it does not seem possible to get sponsorships for free accommodations for UIS Bureau members.

3. UIS Day Celebration (Friday)

This will include lectures, free tourist visit of Postojnska jama (organized) and a celebration in the cave (up to 1 hour), and a reception. There is consideration of creating postcards and a special stamp. The President of Slovenia and ministers will be invited.

UIS Day banquet will be semiformal with a menu that will cost 25 Euros/person for self-service or an additional 2,6 Euros for service. Beer costs are under negotiation. Soft drinks and red wine will be purchased at a discount shop. White wine may be provided with special UIS labels at 2,5 Euros/bottle.

4. Publications

A booklet will need to be printed with details on the excursions, abstracts, general program, UIS history paper, the UIS President's speech, etc.

5. UIS invited guests?

Will the Bureau invite somebody to participate and we will cover costs? No one was specifically identified.

DECISION 4: UIS approves Nadja Zupan Hajna to pay up to 3000 Euros in costs for the UIS Anniversary Celebration if registrations fees do not cover all of the expenses. The Bureau members will not pay the registration fee for the celebration. If the cost is more than 3000 Euros, Nadja Zupan Hajna will present the excess cost to the Bureau and the Bureau will decide at that time if more than 3000 Euros can be paid.

ACTION 7: Nadja Zupan Hajna and Zdeněk Motyčka will create a circular in PDF format for posting on the Karstological School and UIS websites to promote the UIS Anniversary Celebration. They will send it to Efrain Mercado for translation into Spanish.

9) UIS History Book (J.A. Labegalini)

The book has made progress with a lot of input from various people. Time is short and José Labegalini needs prompt replies. He will stop collecting information in December or January. The book will be ready for the 50th Celebration.

There was general discussion on the cost of printing, how much to spend, and how to sell/distribute the book.

10) UIS Film (M. Garašić)

Mladen Garašić is coordinating with Boris Watz, who is still recovering from his badly broken leg. Boris will send some preliminary material soon for discussion on how to proceed. He is currently focusing on a film for the 50th UIS Anniversary Celebration and then perhaps another film that could be ready for the 2017 ICS.

11) ISCA (J.-P. Bartholeyns)

There is progress on the proposed Show Cave Guidelines but problems from at least a couple of ISCA members focused on wood and numbers of visitors.

Some ISCA members are concerned that the guidelines are too strong and will be seen as requirements by countries overseeing the show caves.

Jean-Pierre Bartholeyns reported that he and Arri-go Cigna are happy with the draft received from David Summers as a good compromise to address the concerns.

We must now see what happens at the ISCA Congress next week, but UIS will continue to assist and work with ISCA as desired on the protection of caves.

It was observed that the UIS 2002 agreement with ISCA says that ISCA will be affiliated with UIS. However, that affiliation needs to be formalized under the new UIS rules for Affiliated Organizations.

ACTION 9: Kyung Sik Woo will discuss renewing and updating the affiliation with ISCA at the ISCA Congress next week.

The meeting was recessed for the day so the Bureau could go to Penrith from 14:00-17:00 and inspect the venue for the 17th ICS.

SESSION 2

Saturday, November 1, 2014; 09:00-16:00 (local time)

Attendance

President: Kyung Sik WOO

Vice-President of Administration: George VENI
(*acting Secretary for the Minutes*)

Vice-President of Operations: Efrain MERCADO

Adjunct Secretaries:

Jean-Pierre BARTHOLEYNS

Nivaldo COLZATO

Christian DODELIN

Mladen GARAŠIĆ

Zdeněk MOTYČKA

Nadja ZUPAN HAJNA

Honorary members/Past-Presidents:

Andrew James EAVIS

José Ayrton LABEGALINI

Bureau members not in attendance:

Giovanni BADINO

Fadi NADER

Guests: Denis MARSH

Nicholas WHITE

12) Status of the 2017 ICS

George Veni reported that there may have been some confusion among some of the ICS organizers about the Bureau's expenses during this visit to Sydney.

They are not meant to be paid by the Australian cavers but are part of the ICS expenses and that advance funds are available from the UIS to cover those and other expenses if needed.

Denis Marsh, Chairman of the 17th ICS Organizing Committee, gave a report on the progress of the 17th ICS. There have been some delays in organization due to Stan Flavel's health issues. However, this is still early in the process and some aspects of the ICS are still being organized. Nick White is the Vice President, Jim Crockett is the Secretary, and David Butler is the Treasurer.

Subcommittees have been established for registration, field trips, program, public relations, the venue, and lodging. The subcommittee chairs will have coordinators working for them to get the jobs done.

Australia is expensive and they are working on sponsorships to reduce costs. The venue has challenges but they are not insurmountable. The 17th ICS has full backing of the Australian Speleological Federation.

Denis asked for questions, feedback, and a vote of confidence. He received all three from the Bureau.

ACTION 10: Bureau members will send George Veni all of their comments, suggestions, ideas, and concerns about the 17th ICS by 30 November 2014. George will organize them and send them to the ICS officers.

13) UIS Media

Nivaldo Colzato wants to use the Bulletin to more effectively promote the UIS, and not just record UIS activities. He is also working to better maintain the list of member countries and connections with those countries.

Kyung Sik Woo asked that updates be sent to Fadi Nader and Nadja Zupan Hajna. Zdeněk Motyčka suggested creating an e-mail list of individuals, not just delegates. The ICS registration lists can be used as the basis for such a list.

ACTION 11: Efrain Mercado will compile e-mail addresses for ICS attendees, other individuals, delegates, and from club mail addresses into a database for a full UIS e-mail list.

Nivaldo Colzato reported that the UIS logo has been used in many ways and in different colors, even though there is only one official logo. Consistency is needed and he is developing a document with details on how the logo looks and can be used.

ACTION 12: Nivaldo Colzato will expand his draft guide for the logo to a branding guide for all UIS symbolic devices (logo, flag, anthem, fanfare, etc.), which will be attached to the revised Internal Regulations. He will send a draft version for comments by the end of 2014.

Bureau members should send comments on current guide by end of November 2014.

14) Cave Rescue: International reactions – lessons learned in 2014 (C. Dodelin / E. Mercado)

a. Review of recent rescues: Christian Dodelin explained that the rescue in Germany was very complex. Many resources were used. There were cavers and cave rescue personnel from several nearby countries, including the Austrian cave rescue team. Dodelin has long suggested that the official rescue organizations work with cavers, but it has not been possible so far. When the accident occurred, international cavers were not initially accepted by the official German mountain rescue team, except for the Swiss.

After four days, Italian cavers and a Slovenian doctor entered the cave. In the end, too many people arrived and most were not needed. Insurance is now needed for caving in Germany and the cave is closed.

Insurance for individuals is over 1000 Euros so insurance through organizations is needed.

Efrain Mercado explained how the Peru rescue of a Spanish caver had complications with the remote site and poor local organization. There is no local cave rescue team. Neither the Peruvian nor the Spanish governments offered any rescue support until the accident was internationally publicized.

The Spanish rescue team was accepted because the caver was Spanish. The rescue was self-funded and donations are sought to cover the expenses. Like in Germany, there were too many unnecessary people on site consuming needed rescue resources.

Efrain had a team of Belizian, Brazilian, Costa Rican, Mexican, and US cavers ready to go, but he could not get permission from Peru. Zdeněk Motyčka suggested developed a multinational rescue agreement, as between the Czech Republic, Poland, and Slovakia, which makes rescue cooperation easy.

ACTION 13: Christian Dodelin and Efrain Mercado will summarize the situation from the 2014 German and Peruvian rescues and provide recommendations in an article for the UIS Bureau by 15 December 2014.

b. Code of Ethics reinforcement (E. Mercado): The Code of Ethics should include setting up an emergency plan in the country visited.

ACTION 14: Christian Dodelin and Efrain Mercado will write an addition to the Code of Ethics to discuss rescue and send it to the UIS Bureau to review in time for discussion at the next Bureau meeting.

c. Caving insurance: George Veni was contacted by Baerbel Vogel, President of the German Speleological Federation, for a list of countries with insurance or other funds for cave rescue costs.

ACTION 15: George Veni will contact the President of the German Speleological Federation and recommend she contact Christian Dodelin, Andy Eavis, and Paul Williams for information on caving insurance.

15) UIS Relationships with Regional Organizations and Countries (K.S. Woo)

a. European Federation (FSE) sent a letter officially requesting to become an Associated Speleological Organization of the UIS.

Zdeněk Motyčka pointed out that the Czech Republic did not join the FSE and has suffered retaliatory attacks, such as boycotting of the Brno Congress, although some of this has been the action of one person who is no longer on the FSE Bureau.

DECISION 5: The Bureau approved the FSE as an Associated Speleological Organization of the UIS; Zdeněk Motyčka abstained from voting. Fadi Nader will notify the FSE.

b. Possible proposals for 2021 ICS:

i. Brazil (J. Labegalini): The Brazilian Speleological Society proposed this idea to evaluate the evolution of speleology over the past 20 years from when a congress was last held in Brazil. It would be held in a karst area of southern Brazil and would be only the second ICS in South America. They recognize the tradition of the congress going back to Europe after each out-of-Europe ICS, but ask their proposal be given serious consideration.

ii. France (C. Dodelin): Proposal in the region of the Alps with lots of caves and prehistoric cave sites.

iii. Italy/Slovenia (N. Zupan Hajna): Meeting along the border held by both countries in the Classical Kras. Jo De Waele asked Nadja Zupan Hajna if they would work together and symbolically reunify the karst and countries. The Karst Research Institute in Slovenia and the Italian Speleological Society would help organize this ICS.

c. Status on Iran (K.S. Woo): Kyung Sik Woo was invited to an Iranian national geology conference on 10 topics. It started in Tehran with a day of plenary sessions, then split with buses going to different venues for each topic.

The cave symposium was arranged by the Iran Mountaineering and Sport Climbing Federation (IMF). During the event he found the IMF and the Iranian Caves and Speleology Association (ICSA) were not communicating, resulting in inefficiencies.

He met with IMF President Fahimi and ICSA President Hasheminezhad and asked for an international agreement among them. Hasheminezhad is the UIS delegate and his wife is the vice delegate. They agreed to make an IMF representative a vice delegate but Kyung Sik has not heard

anything since.

Fadi Nader sent an e-mail to get a letter of mutual agreement, followed by another message from Kyung Sik, but no reply has been received yet. They may be waiting for governmental approval.

Nadja Zupan Hajna pointed out that they have not paid dues for last year or this year and are not replying to her e-mails.

ACTION 16: Kyung Sik Woo will write a letter to both Iranian organizations to remind them of their agreement to work together and need to reply to UIS with their decision, and that they need to pay their dues.

16) Increasing UIS' international recognition (K.S. Woo)

a. Action plan

i. Prize (certificate of award or plaque): Everyone supports the idea of giving UIS awards for major achievements and contributions to speleology. Nivaldo Colzato is working to establish the details.

It was proposed that major awards could be named after major international UIS figures.

ii. Status within ICSU: Kyung Sik Woo explained what ICSU is and its relationship and benefits to UIS. UIS is Associated Member (Full Member is too expensive) but UIS can get involved in any ICSU program, which gives UIS opportunities for major policymakers to learn about the importance of speleology in research and policy.

Kyung Sik recommends continuing UIS involvement with ICSU and identifying two delegates to go to ICSU meetings, including the cost of travel estimated at \$3000/person once every three years.

DECISION 6: Kyung Sik will be the delegate to the next ICSU meeting in 2017 and UIS will approve the costs before the travel, if he cannot get travel funds from other sources.

Physical Chemistry and Hydrogeology Commission proposal; support letters needed: George Veni explained that the commission was applying for an ICSU grant on behalf of the UIS and that letters of support from ICSU members were needed.

Commission President Yavor Shopov asked if the Bureau would pay for equipment to support the proposal but the consensus was to not pay for equipment before the grant was received.

ACTION 17: George Veni will send the Bureau list of ICSU members for letters of support for the ICSU grant.

iii. Invite underdeveloped countries to join the UIS: Find creative ways to encourage and help them attend the ICS and join the UIS.

ACTION 18: Jean-Pierre Bartholeyns will coordinate outreach to recruit new member nations, especially from underdeveloped countries.

ACTION 19: Nivaldo Colzato will create a Power-Point with information on the UIS and which encourages cavers to become involved with the UIS. It will be designed for presentation by Bureau members.

iv. Increase in public awareness of cave/karst protection.

v. Development programs of cave education (survey, exploration and investigation).

vi. UIS book for children: Jean-Pierre Bartholeyns is concerned that children's books need to be very specific to their age and the types of caves in the child's region.

Kyung Sik Woo said he was suggesting something more general. Nadja Zupan Hajna suggested targeting young, emerging cavers.

Efrain suggested publication as an e-book and will work with Jean-Pierre on the development of the text. The topic should be discussed with the UIS Department of Education.

b. Long-term plans

i. Fund-raising: Kyung Sik Woo reported that 2,500 Euros were anonymously donated to the UIS and that Andy Eavis and Zdeněk Motyčka will work together on fundraising.

ACTION 20: Zdeněk Motyčka will organize a fundraising team and present fundraising strategies and draft materials in 2015.

ii. Expansion of memberships.

iii. Promotion of commission activities.

iv. Collaboration with other Unions.

c. Kyung Sik Woo suggested the following roles for the Adjunct secretaries:

i. Giovanni Badino: Promotion of commission activities.

ii. Jean-Pierre Bartholeyns: Expansion of UIS new country memberships and assist with UIS educational electronic publication.

iii. Nivaldo Colzato: UIS newsletter and other publications, and create informational UIS PowerPoint.

iv. Christian Dodelin: International support of caving education for underdeveloped countries.

v. Mladen Garasic: UIS film.

vi. Zdeněk Motyčka: Fund raising and promotion of international caving expeditions.

vii. Nadja Zupan Hajna: Acting Treasurer, the 50th Anniversary.

viii. Invited Adjunct Secretary: 2017 ICS.

17) Other business:

a. Approval of US National Cave and Karst Research Institute as an Affiliated Organization of the UIS:

George Veni said he would stop being a UIS Bureau member for a few minutes in order to represent the US National Cave and Karst Research Institute (NCKRI) where he is the Executive Director. He applied for Affiliated Organization status with the UIS, but asked for reduced or waived annual fees because NCKRI has:

- hosted the UIS International Workshop on Ice Caves;
 - helped produce two issues of the UIS Bulletin;
 - paid for the creation of the UIS educational CDs that were distributed for free in Kerrville;
 - sponsored the 15th ICS with \$10,000;
 - partnered with the UIS in the Karst Information Portal, which is generating publicity for the UIS and is an important benefit to cavers around the world; and
 - arranged for the UIS' International Journal of Speleology to be now published for free digitally and is available for free internationally through the Karst Information Portal.
- Veni left the room while his request was discussed and decided.

DECISION 7: UIS will accept NCKRI as an Affiliated Organization and NCKRI will pay 300 Euros/year.

b. Status of UIS Awards: Nivaldo Colzato reported on his efforts to enhance the UIS awards and improve the award process.

ACTION 21: Nivaldo Colzato will make a list of suggested awards, honorary names, and procedures to apply and for receiving awards, and will send it to the Bureau for comments by the end of 2014.

c. Commission request: George Veni reported that he thought the Bureau had approved a request for US \$150/year from the Karst Hydrology and Speleogenesis Commission to support the Speleogenesis website. However, he could find no record of it in any of the Bureau minutes or e-mails.

DECISION 8: The Bureau agreed to pay the Karst Hydrology and Speleogenesis Commission US \$150 each year through 2017 to support the Speleogenesis website. George Veni will notify the commission and Nadja Zupan Hajna will send the payment.

d. Anniversary souvenir: Zdeněk Motyčka asked about creating a memorial coin or other item for the 50th UIS anniversary.

ACTION 22: Zdeněk will send the Bureau a suggestion and costs for a UIS Anniversary souvenir by the end of 2014.

18) Speleological events since the last Bureau meeting

There was consensus that reports on past events should be limited to those where some presentation or promotion was made on the UIS and not just where Bureau members attended.

a. NSS Convention, 5-9 August 2013 (Shippensburg, Pennsylvania, USA): George Veni attended this event. It was attended by about 800 cavers and cave scientists, a lower than average number because about 150 attended the ICS in Brno a week earlier.

b. EuroSpeleo Forum 2013, November 2013, (Casola, Italy): Christian Dodelin, Mladen Garašić, and Zdeněk Motyčka attended.

c. Balkan Speleological Conference, 28-30 March 2014 (Sofia, Bulgaria): Efrain Mercado attended.

d. International Conference on Integrated Use and Protection of Underground Spaces Devoted to the 100th Anniversary of Kungur Ice Cave Exploration, 26-31 May 2014 (Kungur Ice Cave, Perm, Russia): Kyung Sik Woo attended.

e. Karst without Borders, 11-15 June 2014 (Trebince, Bosnia and Herzegovina): This is a UNESCO supported meeting of the Karst Commission of the International Association of Hydrogeologists. Mladen Garašić attended this meeting.

f. 22nd International Karst School, focus on Microbiology, Postojna, Slovenia (June 2014): Pavel Bosak and Nadja Zupan Hajna attended this event.

g. NSS Convention, 14-18 July 2014 (Huntsville, Alabama, USA): George Veni attended this event. It was held at the new NSS Headquarters and attended by about 1200 cavers and cave scientists.

h. International Workshop on Ice Caves VI, 17-22 August 2014 (Idaho Falls, Idaho, USA): NCKRI organized this event and George Veni chaired it for the UIS Commission on Glacier, Firn, and Ice Caves. Thirty-two people from 11 countries attended.

Twenty papers were published in the proceedings, which are available for free on the Karst Information Portal. Andrej Mihevc also attended and will organize the next meeting for 2016 in Postojna, Slovenia.

i. EuroSpeleo Forum 2014, August 2014, (Romania): Jean-Pierre Bartholeyns, Christian Dodelin, and Mladen Garašić attended.

j. 31st ICSU General Assembly, 31 August – 3 September 2014 (Auckland, New Zealand): Kyung Sik Woo and Paul Williams attended and spoke on behalf of the UIS.

k. Karst Record Conference (7), 29 September - 3 October 2014 (Melbourne, Australia): Andy Eavis, Derek Ford, and Paul Williams attended this conference.

l. Geological Society of America Convention, 19-22 October 2014 (Vancouver, British Columbia, Canada): George Veni attended this event along with 6,700 geologists from around the world. The convention included three karst

sessions, one karst field trip, and the creation of a Karst Division within the organization.

19) Future speleology events until end of 2015 that UIS should consider attending

a. SCA Congress, 2-8 November 2014 (Jenolan Caves, Australia), <http://www.i-s-c-a.com/event/39-is-ca-7th-congress>: All of the Bureau, except George Veni, plus Andy Eavis and José Labegalini will attend this event.

b. Karstology in Arid Regions, 2-9 March 2015 (Abu Dhabi, United Arab Emirates), <http://abudhabi.zrc-sazu.si/>: This event is co-organized by the Karst Research Institute and Nadja Zupan Hajna may attend.

c. Hypogea2015, International Congress on Artificial Cavities, 11-17 March 2015, (Rome, Italy), <http://hypogea2015.hypogea.it/>: This is an event of the UIS Commission on Artificial Cavities.

d. Cuban Speleological Society 75th Congress, April 2015 (Camaguey, Cuba): Efrain Mercado may attend.

e. 13th International Cave Rescue Conference, 16-19 April 2015 (Le Camp, Vaumarcus, Switzerland), www.riss2015.ch: Christian Dodelin will attend.

f. EuroSpeleo Forum 2015 and XXII Italian National Congress of Speleology, 30 May - 2 June 2015 (Pertosa-Auletta, Italy), <http://www.congressospeleo2015.org/english/index>: Arrigo Cigna, Paolo Forti, and Mladen Garašić may attend.

g. 23rd Karstological School and UIS Celebration, 15-19 June 2015 (Postojna, Slovenia): The 2015 UIS Bureau Meeting will be held at this event in the UIS office at the Karst Research Institute.

h. 33rd Congress of the Brazilian Speleological Society, 15-19 July 2015 (Eldorado, São Paulo, Brazil), <http://www.cavernas.org.br/33cbe.asp>: Nivaldo Colzato and José Labegalini will attend.

i. KG@B, International Conference on Groundwater in Karst, 20-26 June 2015 (Birmingham, UK), <http://www.birmingham.ac.uk/generic/kgatb/index.aspx>.

Andy Eavis will attend this event.

j. NSS Convention, 13-17 July 2015 (Waynesville, Missouri, USA); <http://nss2015.caves.org/>: George Veni will attend this annual convention.

k. 13th Symposium on Pseudokarst, 16-20 September (Czech Republic), <http://www.pseudokarst.de.vu/>: This is an event of the UIS Commission on Pseudokarst and Zdeněk Motyčka will attend.

l. 14th Multidisciplinary Conference on Sinkholes and the Engineering and Environmental Impacts of Karst, 5-9 October 2015 (Rochester, Minnesota, USA), <http://www.sinkholeconference.com/>: NCKRI is jointly organizing this event with the Minnesota Ground Water Association and George Veni is co-chairing it. It is the longest-running international meeting on engineering and environmental problems in karst.

m. Asian Conference on Speleology, October 2015 (China): Kyung Sik Woo will attend.

n. National Cave and Karst Management Symposium, 19-23 October 2015 (Cave City, Kentucky, USA), <http://nckms.org/>: George Veni may attend this meeting.

o. Geological Society of America (GSA) Convention, 1-4 November 2015 (Baltimore, Maryland, USA), <http://www.geosociety.org/>: The new GSA Karst Division is already planning several cave and karst sessions and two field trips. George Veni will attend.

ACTION 23: George Veni will send the list of speleological events to the UIS website.

20) Closing Statements (K.S. Woo)

Kyung Sik Woo closed the 2014 UIS Bureau meeting and thanked everybody for their presence and their contribution.

ACTION 24: George Veni will prepare the minutes of the 2014 Bureau meeting and the Action List for 2014-2015.



José Ayrton Labegalini

UIS Bureau meeting in Sidney, Australia. Facilities provided by the Australian Speleological Federation.



© Nivaldo Colzato

Members of the Organising Committee of the 17th ICS and the UIS Bureau during the visit at the Penrith Panthers Congress Facilities, the venue for the next ICS in 2017.

RECOMMENDED INTERNATIONAL GUIDELINES FOR THE DEVELOPMENT AND MANAGEMENT OF SHOW CAVES



3rd november, 2014

Developed by

International Show Caves Association (ISCA)
International Union for the Conservation of Nature (IUCN)
International Union of Speleology (UIS)



FOREWORD

Caves are known to have provided shelter to mankind's earliest ancestors. So early in mankind's history did this use occur, that it is not possible to reliably trace the time that it commenced. The task of establishing the use of a cave for our modern term "speleological tourism" is easier, but it is still not possible to be absolutely definitive when this use commenced.

The earliest use of a cave as a show cave in Europe is claimed by Vilenica Cave, in the far west of Slovenia, which reportedly started its long tradition of use as a show cave as early as 1633. Other parts of the world may well claim to have commenced the use of caves as show caves at even earlier dates.

For centuries the use of caves, as show caves, was carried on in very rudimentary ways. The most significant change came with the introduction of electric lighting but, even following the introduction of this modern marvel, the practice of developing show caves did not change all that much.

This all changed in recent decades when the development of new materials created many new options. Some of these options have proven to be of great benefit to show caves, while some of these new materials have proven, over time, to be nothing short of disastrous.

The concept of establishing recommended guidelines, that could be used as general policies in show caves, originated during informal discussions between members of the International Show Caves Association (ISCA) in Genga, Italy, at the time of the inaugural meeting of the Association in November, 1990.

These discussions continued over time and were first drafted for consideration at an ISCA meeting held on 17th September, 2004, during the 30th Anniversary of the opening of Frasassi Cave, in Italy, to the public. The idea of creating guidelines, received strong support from the Union Internationale de Spéléologie (UIS) Department of Protection and Management at the 14th International Congress of Speleology held in Kalamos, Greece, in August, 2005.

These Recommended International Guidelines are the result of wide cooperation between the International Show Caves Association (ISCA), the Union Internationale de

Spéléologie (UIS) and the International Union for Conservation of Nature (IUCN). The intention was to create commonly accepted Recommended International Guidelines that all show cave managers and operators can work toward, taking into account both the protection of the environment and socio-economic constraints. Many recommendations and suggestions have been received over the course of nearly twenty-five years, and therefore this document can be considered as the result of an active cooperation among specialists involved in this matter.

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1 - PURPOSE

The purpose of these recommendations is to provide guidance in the best practices for the development and

management of show caves, wherever they may be situated in the world. It is not the purpose of these Recommended International Guidelines to create rigid rules, or that they be construed as laws. They are guidelines for a professional approach to cave development and management.

It is recognized that many existing show caves will not be able to initially comply with these Recommended International Guidelines. These Recommended International Guidelines are intended to provide standards that can be worked towards over time. It is a fact that general rules can never be absolutely applicable to all situations. There could be unusual parameters in some caves around the world where, for acceptable reasons, some parts of these guidelines could not be applied without huge difficulties.

These Recommended International Guidelines are intended to be kept in an updated format to take into account new information and findings. For this reason these Recommended Guidelines have not been incorporated into the Constitution of the International Show Caves Association.

2 - CONTINGENT AND LIMITING CONDITIONS

As stated in the preceding section these Recommended International Guidelines are provided as recommendations for show caves to aspire to. It is highly improbable that all show caves presently in operation will be able to meet all of the provisions contained in these Recommended International Guidelines. These Recommended International Guidelines are provided as goals that show caves can work towards as provided by their circumstances and economic ability.

Under no circumstances are these Recommended International Guidelines to be construed, or be interpreted, as standards that must be complied with as a legal requirement in any jurisdiction, or that a show cave must be compliant with these recommendations.

There are many different kinds of caves throughout the world. These different kinds of caves include limestone caves, gypsum caves, ice caves, lava caves and sea caves to mention a few. Many of these different types of cave have different, and sometimes unique, requirements compared to other types of cave. These Recommended International Guidelines have been created to give suggestions and guidelines on scientific and practical matters to assist managers and owners of show caves all over the world.

3 - DEVELOPMENT OF A CAVE INTO A SHOW CAVE

The development of a wild cave into a show cave can be a very positive financial success, not only for the show cave itself, but also for the broad area surrounding the cave. The pursuit of these anticipated financial benefits can sometimes cause undue pressure to be applied to hasten the development of the cave. It also may provide protection to the cave environment if issues, such as vandalism, threaten.

Before a wild cave is developed into a show cave detailed studies to evaluate all aspects of the conversion of the

cave should be carried out. These studies not only need to focus on the commercial aspects of the proposal, and its impact on the surrounding area above ground, but also on the cave itself. Above and below ground aspects can be absolutely critical to the long term success of the venture.

A careful study of the suitability of the cave for development as a show cave should be carried out, and be carefully evaluated, before physical development work is commenced. This study, or studies, should take into account all factors that can influence the development of the cave or portion thereof including, but not limited to, access, impact on fauna, air flow and the synergy in the cave.

The conversion of a cave into a show cave should only take place if the results of the studies are positive. Similarly, the development should not be undertaken if the economic plan is negative. A wild cave that is developed into a show cave, and is subsequently abandoned, will inevitably become unprotected, and could be subject to misuse in a very short time if sufficient measures are not taken to combat that.

In addition it can be acceptable to open caves for visitation by the public, when the economic plan is not positive, but the economic success is guaranteed by the State or even by a local club of volunteers.

A well managed show cave usually provides protection for the cave as well as providing a source of income and education for the local economy.

4 - VISITOR SAFETY

The safety of the visitor must be a fundamental objective of any show cave. This includes above and below ground level, and includes all parts of the property. Traffic entering and egressing the property should be via appropriately surfaced roads and parking areas. Good organization is essential.

Below ground it is not always possible to comply with building code standards. In planning trails in the cave the safety of the visitor must be the primary consideration. Headroom is important underground, and where adequate headroom is not achievable, warnings should be given otherwise injury may occur. Handrails should be provided where necessary underground.

Planning visitor safety also includes making sure that emergency services can gain access to the cave in the best possible way. This includes access for emergency vehicles to be able to come as close as possible to the cave entrances and/or exits. Liaison should be established with local emergency services so that all are aware of the constraints and difficulties that will be encountered in cave rescue, which usually involves a lot of physical effort and may have severe impacts on the cave environment itself unless plans are in place.

Appropriate training for rescue and first aid should be provided to the staff of a show cave.

5 - ABOVE GROUND LEVEL WORKS

In order to relate the topography of the site to the un-

derground void of the cave it is necessary to have a site plan that depicts the surface detail and the underground detail of the cave. This information is as critical to an existing show cave as in the case of one that is being planned.

Once the relationship between the above ground features and the subterranean detail is known, then the factors related to water can be assessed. In many cases this factor may only comprise the percolation of surface water down through the rock above the cave. This should be carefully assessed to ensure that the natural percolation of water down through the rock above the cave is not perturbed. In addition the risk of surface water gaining access to the cave, as flood water, needs to be very carefully examined.

It is important that hard surfaced areas, such as buildings and parking areas must not be positioned above the cave itself, where the natural seepage of rainwater from the surface to the cave occurs. If the natural percolation would be interfered with, other solutions should be sought. These solutions can be as simple as converting the surface of a watertight parking area into a form of surfacing that permits the passage of rainwater through it. Where buildings are situated above the cave they should preferably be relocated or, if finances do not permit relocation, be relocated when the building comes to the end of its life span. Run-off water from roofs and other hard surfaces must not be allowed to concentrate and should be dispersed widely.

It is also critical to ensure that any effluent, that is generated on the site, is disposed of properly and is not allowed to contaminate the below ground world.

There is a natural tendency to try and place the buildings, necessary for the operation of a show cave, close as possible to the cave entrance. Of particular importance is that an entrance or exit of a cave should not be inside an inhabited building owing to the potential danger from radioactive gas and radon. There should always be a ventilated area between an entrance and/or an exit to the cave, and an inhabited building.

6 - ACCESS INTO A SHOW CAVE

In the case of many show caves, it is necessary to provide a different access into the show cave for the visitors, than the access into the natural cave that was used before the conversion of the cave into a show cave. Such an artificial access could be via a tunnel, or a new entrance, excavated into the cave. When an artificial entrance is created this could change the air circulation in the cave and cause a disruption to the cave ecosystem.

To avoid any disruption of the air circulation in the cave an airlock should be installed in any artificial entrance into a cave. A decision not to install an air lock should only be made after a special study is carried out. The preferable method of installing an efficient air lock system is through the use of a double set of doors.

7 - PATHWAYS IN A CAVE

An essential component in a show cave is a safe and

good quality walking surface for visitors. The pathways in a cave need not be overly wide. For example, it is not necessary, but it is desirable, for two people to walk side by side. A single file path is adequate, however, it is advisable to create some occasional broader areas where a tour group can be gathered together to listen to the guide.

The pathways in a show cave can be used for the placement of utility pipes, conduits and cables, either underneath the surface of the pathway, or beside it. It is preferable that these utilities are not encased in concrete. The control switches of the lighting system should be readily accessible from the pathway.

The pathway should consist of three fundamental components, comprising a walking surface, side kerbing and handrails. It is desirable that the materials used in installing the pathways should have the least possible impact on both the aesthetics of the cave and its underground environment.

WALKING SURFACES

Traditionally, and particularly in limestone caves, the favoured material for the walking surface has been concrete, which is generally the closest substance to the rock that the cave is formed in. Once concrete is cast it is extremely expensive and difficult to modify or decommission.

In recent years the use of stainless steel has become increasingly popular as a material for constructing footpaths. Stainless steel has the distinct disadvantage that it is expensive and requires special techniques to assemble and install. Its advantages are that it lasts for a long time, and requires virtually no maintenance, has a reduced impact on the cave floor and is relatively easy to remove.

However, grids of all types allow dirt, mud and small objects to fall through onto the cave floor and, unless design takes this into account, it can be very difficult to remove.

New age plastics also have great potential for use in constructing pathways. These materials are reviewed under the subsequent section entitled New Age Materials

KERBS

The use of kerbs became popular with the use of concrete pathways. Kerbs alongside concrete pathways have several distinct purposes. One is to contain the feet of visitors, which protects the cave features beyond the pathway. The other is that the side of the kerbs, facing away from the pathway, provides a convenient place for the utility conduits, pipes and cables. Kerbs can also help contain lint, and other residue, from visitors.

Kerbs along concrete pathways can be easily formed with several courses of brick, that is plastered over. Where pathways are formed in stainless steel, plastics or fiberglass, kick plates can be incorporated into the design to prevent feet from straying beyond the pathway.

HANDRAILS

The favoured material for the construction of handrails in show caves, in recent years, has been stainless steel.

This material has the advantages of requiring little, to no, maintenance, being able to be assembled and welded in the cave and having potential to be used as water piping to carry fresh water into the cave. The disadvantages of this material are its cost and its brightness, which is not aesthetically pleasing. The use of stainless steel wire rope, rather than solid intermediate uprights or solid rails that are installed below the actual handrail itself, can reduce the visual impact of solid steel significantly. Curves rather than acute angle bends also help.

Recently, great advances have been made with continuous fibreglass (isophthalic polyester) handrails. This is reviewed under the subsequent section entitled New Age Materials.

8 - VISITOR CAPACITY

Visitor capacity is the number of visitors to a cave over a given time period, which will not permanently change the environmental parameters beyond their natural fluctuation range. Heat released by persons and lights can be important factors that can cause a possible disruption of a cave's energy equilibrium. It is the responsibility of the management of a cave to establish the maximum cave visitor capacity, where the natural environmental parameters of the cave may be affected.

9 - LIGHTING

The use of LED lighting, which is energized by a low voltage power supply, has many advantages over incandescent lighting, which emits light as a result of being heated. It is important that the lighting system inside a cave releases the lowest amount of heat as possible.

The electric lighting network in a cave should preferably, where the scale permits, be divided into zones to enable only the part or parts of the cave that are occupied by visitors to be lit. This is important from the aspects of reducing the heating of the cave environment and preventing the growth of lampenflora, as well as reducing the amount of energy required and its financial cost.

The electrical system should be installed in safe, well-balanced circuits.

It is important that some form of emergency lighting should always be available in the event of a failure in the main power supply. Emergency lighting should always be available whether it is a complete non-interruptible power supply or an emergency lighting system with an independent power supply. Local codes may be applicable and these may permit battery lamps or similar devices.

Lampenflora is a common consequence of the introduction of an artificial light supply into a cave. Many kinds of algae, and other superior plants, may develop as a result of the introduction of artificial light. A good method of avoiding the growth of green plant life in the dark zone of a cave is to use lamps that do not release a light spectrum that can be absorbed by chlorophyll.

Another way to prevent the growth of lampenflora is

to reduce the energy level reaching the surface where plants may live. The safe distance between the lamp and the cave surface depends on the intensity of the lamp. As a rough indication, a distance of one metre may be safe. Light should be carefully directed onto the feature to be illuminated and light spill onto surrounding areas should be avoided. It is best if features to be illuminated are solid crystalline or rock surfaces as soft surfaces, such as moonmilk and soil, are virtually impossible to clean. Special care should be paid to avoid heating the decorations and any rock paintings that may exist.

10 - LAMPENFLORA

Lampenflora is the infamous scourge of show caves. It is a persistent problem. The use of strong cleaning agents such as chlorine bleach appeals to the desire to get rid of contaminating organisms like algae. Unfortunately, the use of chemicals, such as chlorine bleach, does not work well in the long term because the organisms grow quickly when given the right conditions. The only way to correct the algae problem is to control the development of lampenflora, rather than periodical treatment with chemicals, which only kill the growth for a short period.

There are different actions that can be taken to control the development of lampenflora in show caves. The first of these actions should be to ensure that the cave lighting is on separate circuits so when there are no visitors in a given area the lights can be switched off in that area. The second of these actions is to ensure that there is a minimum of one metre between the lamp and the cave wall or formations. The third of these actions is to ensure that the wave length selection has minima in the ranges of 430-490 nanometres and 640-690 nanometres, and emit nonphotosynthetically active wavelengths.

When lampenflora proliferates it is necessary to destroy it with chemical compounds Herbicides, however, should never be used in a cave as they are too toxic for the environment of the cave. Herbicides, used frequently in agriculture, must be avoided because their degradation is slow and its toxicity may seriously affect the cave fauna.

The two chemicals that are generally favoured, in diluted form, are sodium hypochlorite (chlorine bleach) and hydrogen peroxide.

Chlorine bleach, which is regular household bleach, should always be used in diluted form of a 10% solution.

Hydrogen peroxide is generally considered to be more environmentally friendly, but reports of effectiveness are mixed and the personnel involved in the treatment should take great care. The threshold concentration for the destruction of lampenflora has been found to be 15% by volume.

11 - RADON

It is recommended that show cave owners and/or managers research the standards applicable for their country and have their cave monitored by a competent specialist, if it is required.

If the limit of radon concentration is exceeded, the cave guides would be considered professionally exposed workers with great liability for the cave managers and owners.

In such cases it is preferable to limit the working time inside the cave in order to respect the dose limit for the guides.

12 - BATS

Some caves are inhabited by colonies of bats. Where bats exist in a show cave special care should be taken in order to ensure that they are not disturbed by visitors, particularly when the bats are hibernating or breeding. In a show cave with an extensive network of cave systems, care should be taken to ensure that sections of the cave system that are used by hibernating and breeding bats are not used by visitors during these periods.

If gates are installed in entrances and passageways used by bats, it is advisable that the top section of such gates have horizontal bars with an air gap of 15 centimetres high and 45 to 75 centimetres wide. These air gaps will enable bats to have free passage.

13 - NEW AGE MATERIALS

In recent years a whole array of new materials have evolved or been developed. Many of these appear to have good, and even great potential, for use in caves. While some of these new age materials have proven to be excellent for use in caves, some of these new materials have proven to be nothing short of disastrous.

Composite lumber, for example, has proved not to live up to all the promises that was made of it. Compounding the problems being found with it is the diversity of the types of composite lumber. Composite material that contains wood fibre should be avoided as it can support bacterial growth, algae and mould. Specification sheets of all composite material should be carefully checked to ensure that the material contains no wood or paper products.

If it is planned to use composite material in a cave it should only be used after the type of composite material that is being proposed has been the subject of extensive testing in the cave environment that it is proposed to be used in.

Stainless steel has proven to be an excellent material for use in a cave. However, stainless steel comes in a variety of different grades and qualities. Much of the cost of using stainless steel is in the fitting this material for the purpose that it is intended to be used for. Consequently, it is recommended that the higher grades of stainless steel be used when this material is planned to be used in a cave.

Great strides have been made in recent years in the lighting of caves. Light-emitting diodes (LED) and cold cathode lamps (CCL) have proven to be the most successful forms of new types of lighting. Both LED and CCL have a much superior performance compared to incandescent lamps. Additional advantages of LED and CCL is the ongoing low electricity consumption and the life span of the lamps.

A very successful new way of providing emergency li-

ghting, at a low cost, has been provided through a flexible plastic polymer rope with lights inside. This rope light can be easily cut into the lengths desired.

During this century new plastics have been developed that promise great things for caves. A great advantage of these new plastics is that they are lightweight, have mechanical characteristics close to steel, and are easy to work with simple tools. The plastic portions are joined with stainless steel bolts, which make it easy to update the design in the future. Pathways can be constructed through pultrusions, which is a plastic created by drawing resin-coated glass fibres through a heated die. These are often coated with grit to provide better traction but they can wear very quickly if there are large numbers of visitors. Handrails can also be created with fibreglass.

14 - MATERIALS THAT USUALLY DO NOT BELONG IN A SHOW CAVE

In considering the matter of what materials do not belong in a show cave, it has to be acknowledged that many of the materials listed in this section have, at some time in the past, been considered to be appropriate for use in a show cave. As a consequence, it is probably difficult to find an existing show cave that does not contain one or more of the materials that are now considered as undesirable. Caves that are in the process of being developed as a show cave should avoid the use of all of the materials in this section.

GALVANIZED METALS

In previous decades galvanized steel piping had been the material of choice for use as handrails, stairs and platforms in show caves.

The zinc in the galvanized material is easily oxidized, and leaches out into the cave environment. The leaching of galvanized coatings may have adverse impacts particularly on invertebrate cave faunas and calcite deposition. This is particularly the case in sensitive underground environments. Where the galvanized steel is in use in an existing show cave, a programme should be developed for its replacement with another material.

DISSIMILAR METALS

The use of dissimilar metals, in contact with each other in a moist environment, will always induce corrosion. This corrosion will also occur when different alloys of the same metal, such as different grades of aluminum, are brought into contact with each other.

The first and best solution is not to use dissimilar metals in contact with each other. The next best solution is to isolate the materials from each other, using devices such as neoprene or nylon washers, but this may only delay the inevitable if a film of water extends across the barrier.

It is also recommended that sacrificial anodes not be used, as such anodes will produce some sort of chemical compound, which may have adverse effects on caves.

NON-FERROUS METALS

Many non-ferrous metals have been used in caves in the past. Perhaps, the most common of these has been copper, and related alloys, which have been the source of many green stains in caves.

IRON AND STEEL

Untreated iron and steel are susceptible to rusting. Even those forms of mild steel that contain a small percentage of carbon are susceptible to oxidizing (rusting). Consequently, raw steel and iron should not be used in show caves as rust stains are bound to result.

WOOD

Wood, has for many centuries been a favoured material of mankind for building and making items, such as furniture. It was natural in the early days of cave development that wood would be used in the development of show caves. Unfortunately, wood has a relatively short life, compared to cave lifespan, before it starts to decay. This includes creosoted and pressure - treated wood.

Generally the environment of a cave is isolated from the outside and the introductions of energy from the outside will change the equilibrium balance of the cave. Exceptions to this occur where a river or stream runs through a cave or where there may be a high organic content for some reason.

When wood breaks down and decays in the environment of a cave the decaying wood can become part of the food base in a cave. The decaying wood can support fungal or bacterial growth and even presents the risk of invasions by exotic species that can replace native cave species.

If any form of wood is used for formwork, scaffolding and similar temporary purposes it should not be worked in a cave, if at all feasible. It should be removed on completion of the work and care should be taken to remove any scraps or splinters resulting from the work or dismantling of a structure.

If decaying wood has to be removed from a cave care should be taken to ensure that it does not disintegrate during transport, and thus provide an unnatural nutrient windfall. Even small traces of rotting wood can cause population explosions among cave dwelling species.

Where wood is found in an existing show cave a plan should be developed to replace it with other materials, as economics permit and where the introduction of wood would cause a significant change in the natural environment. The time period covered by such a plan should be limited by the anticipated life span of the *in situ* wood. When a cave is developed as a show cave other materials should be selected for use other than wood.

In ice caves, the environmental characteristics are compatible with wood, which is frequently used for the construction of pathways and handrails, as it is not slippery and can be easily worked on in freezing conditions.

BITUMEN (ASPHALT)

Bitumen (asphalt) is a black viscous mixture of hydro-

carbons obtained from petroleum. Bitumen has the capability to leach products, which are toxic to biota, and may interfere with calcite deposition. If bitumen is found in an existing show cave, plans should be developed to remove it as soon as possible. Bitumen should never be used inside a cave being developed as a show cave.

15 - MONITORING

Basic monitoring of the cave climate should be carried out on a regular basis and a formal monitoring schedule adopted. The air temperature, humidity, radon (if its concentration is close to or above the level prescribed by the law), and water temperature (if applicable) could be monitored.

Monitoring of the carbon dioxide could be included if its concentrations are substantially outside the range of natural variations. Airflow in and out of the cave could also be monitored.

When selecting scientists to undertake studies in a cave, it is very important that only scientists who have good experience with cave environments be engaged for cave related matters. Many, otherwise competent scientists, may not be fully aware of cave environments. If incorrect advice is given to the cave management, then this could result in endangerment of the cave environment. Cave science is a highly specialized field.

16 - CAVE MANAGERS

Cave managers should be competent in both the management of the business of the show cave and its environmental protection. The managers of a show cave must never forget that it is the cave that is goose that lays "golden eggs" and that the cave must be preserved with great care.

It is necessary that persons involved in the management of a show cave should have experience in both the management and the environment of a show cave.

17 - CAVE GUIDES

The guides in a show cave have a very important role as they are the linkage between the cave and the visitor. It is very important that the guides are properly trained. If at all possible the management of a show cave should try and produce a guide's manual, specifically written about guiding in their cave, or caves.

The guide should be well versed in matters pertaining to the cave, or caves, that they are guiding visitors through.

18 - PUBLIC AWARENESS

The use of signage at the entrance of a show cave, and at other salient points in the immediate proximity, is an excellent way of helping the visitors to the cave know how they should conduct themselves in the cave. When more than one language is common in a given area, it can be helpful to have the messages shown in more than one language.

GUIDE FOR SUBMITTING AND PUBLISHING ARTICLES IN THE UIS BULLETIN



1 – INTRODUCTION

This guide describes the specific format for the articles sent for publication in the UIS Bulletin.

The main objective is to bring UIS Bulletin recipients, a high quality content that respects the principles of publication.

By publishing correct and precise information that clarifies any arousing doubts, the readers will get a much better understanding.

2 – ARTICLE PRODUCTION

2.a – *While making an article or report for the UIS Bulletin, the author is responsible to answer the following main questions:*

*Who?
What?
When?
Where?
How?
Why?*

2.b – *All papers and articles submitted to UIS Bulletin should be preferably in English language.*

If the author is not able to do that, the author will use any of the UIS Official Languages. Exceptionally, we accept the submittance of articles in the author's language (review case by case).

The UIS Official Languages as per the Statutes are:

*French
German
Spanish
Italian
Russian*

2.c – *All papers and articles submitted to UIS Bulletin for publication in a different language, other than UIS Official Languages, as per stated, will have a short and precise abstract (summary) in English.*

The photos and figures included with the article must have subtitles in the original language and in English.

2.d – *It is recommended to the authors to review the articles thoroughly before submission. Linguistic experts could help in this task. Any correction have to be sent on time, accom-*

ding our recommended submittance due date, to avoid delays in the publication.

Editors are not responsible for misspellings or incorrect information even though editors should make their best effort to keep articles as close to the original version as possible.

2.e – *While referring to an institution name in the article, please use the complete official name first, followed by the institution acronym in parenthesis. Example: Unión Internacional de Spéléologie (UIS); International Council for Science (ICSU). Once the complete name of the institution is used, then on you can use only the acronym.*

2.f – *Dates must be written in the following format:
MM/DD/YYYY (Month/Day/Year)*

2.g – *When feasible, units referred in article should be written using the International Standards System (SI).*

2.h – *All bibliographical references used must be included in alphabetical order at the end of the article.*

The use of a general accepted bibliographical system as American Psychological Association (APA) or similar is recommended.

3 - FORMAT

3.a – *When available, the text of the article should be written using Microsoft Word or Open Office (which is an open source office suite), in vertical A4 size format, single column, automatic character spacing and single line spacing.*

3.b – *It is recommended for font type and size used in the article, Times New Roman, 11 points. The editors has reserved the right to modify the final document in order to fit it adequately to the Bulletin model used and space.*

3.c – *Authors should avoid the overuse of the following font types and styles: bold, underlined, italics, and double space between words.*

3.d – *it is recommended a manual change of line when starting a new paragraph.*

3.e – it is recommended an appropriate and consistent form of numbering throughout the document. Please take in to account the avoidance of complex systems. In the case of title and subtitle numbering, please, deactivate the “automatic numbering” mode. Do it manually.

3.f – Save your document or article in **.doc** or **.docx** (MS Word) or **.odf** (Open Office) format whenever possible.

4 – IMAGES

4.a – Images should be inserted immediately after its mention in the article, with its proper subtitle (photos, figures, graphics, maps, logos, etc.)

4.b – In case you are sending photos, it is recommended to send an additional archive with them, including other images or graphic, in **.JPG**, **.JPEG**, **.PNG** or **.TIFF** format.

The minimum resolution should be of **300 dpi** or **1.024 x 768 pixels**, using **RGB** color standard.

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By subtitle it is understood a short and concise text that describes the image. A good title or subtitle clarifies any doubt that an image could present. It should emphasize in relevant aspects and any other important information that the author wish to present.

The information brings additional facts or the context of the image. It should not merely describe what the reader could see by him/herself.

Subtitle shall identify, whenever feasible the people and the place presented in the image. Example: “George Zimmerman (right)”, “From left to right: Mario, Yaneth, Helen and Carol” or “Elizabeth (in green T-shirt)”.

4.e – If the image was already published in other bulletin, site, book, magazine or similar publication, the source shall be mentioned and the permit for reproduction of the image (usually special markings like: ©)

5 – SUBMISSION

5.a – Each article, paper or material shall be submitted to the editors of the UIS Bulletin by means of electronic source, like email. In case of using regular mail we suggest the use of couriers or express mail (expedite mail through country Postal Office, although it is expensive).

Take into account that usually it could take from weeks to months in order to reach its final destination.

Send it in advance and calculate well. UIS Bulletin

have specific due dates for receiving and processing the information. Once finished, editors deliver a copy of the UIS Bulletin to the article author and collaborators, to the email provided.

Please send your full name, title, profile photo, academic title (if you wish), main field of expertise or profession, nationality (or country), main email and alternate email. Please, use the following addresses to submit your article:

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5.b – Due dates for submission of articles (as of 2015)

Edition N° 58 - August 15, 2015

Edition N° 59 - December 15, 2015

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6.a – Viewpoints and opinions (personal or from the represented institutions) expressed in articles are only responsibility of its authors and do not represent, necessarily, in any way, that of the UIS official policies, or reflects that of the Union Internationale de Spéléologie or its Bureau members, unless specifically stated.

6.b – The editors reserve the right to make suggestions and to modify the articles before its publication for reasons of space, internal regulations differences, unprofessional matters, wrongful citations or any other event that do not reflect UIS Bulletin intention of a clear, healthy and reasonable information. This includes any suspicion of plagiarism or discrimination.

6.c – The editors reserve the right to accept or to refuse any article that does not comply with the rules, guidelines and criteria of the UIS.

7 – NON-DISCRIMINATION POLICY OF UIS BULLETIN

7.a – The UIS prohibits discrimination against its member nations, volunteers and providers, on the basis of race, color, national origin, age, disability, sex, gender identity, religion, reprisal, and where applicable, political belief, marital status, familiar or parental status, or sexual orientation.

7.b – Any questions should be submitted in write to the UIS Secretary General, Dr. Fadi NADER, at: fadi.nader@gmail.com

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By: Nadja ZUPAN HAJNA, UIS Treasurer / UIS Adjunct Secretary (Slovenia)

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Prof. Dr. Nadja ZUPAN HAJNA (Slovenia) in United Arab Emirates

ANNUAL CONTRIBUTIONS

The UIS General Assembly at the 15th ICS decided to change the annual contributions of the UIS member-countries to Euro currency, while keeping the same rates as those since 1994. The annual contributions will be as follows, starting from January 2010:

- Category A - 300 Euros
- Category B - 200 Euros
- Category C - 50 Euros

Each UIS member country has the free choice of the category in accordance with its own financial possibilities and with the number of speleologists or speleological societies/ associations/ federations/ clubs/ institutions.

The UIS Bureau authorized to reduce or to remit the contributions, if the UIS member-country makes a respectively written demand. If the UIS Bureau requires, the UIS member country has to give reasons for the difficulties of a payment.

The authorization of the UIS Bureau to reduce or remit the contributions confirms that the impossibility of a payment by actual political problems or difficulties will not be an argument to exclude any member country from the international collaboration within the structure of the UIS.

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EUR (Euros)



*Building of the Karst Research Institute in Postojna, Slovenia, where the headquarters of the UIS are.
In the detail, the bronze plaque with the emblem of the UIS affixed below the name of the institution*



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Calendar of Events 2015

- **Karstology in Arid Regions**, 2-9 March 2015 (Abu Dhabi, United Arab Emirates), <http://abudhabi.zrc-sazu.si/>
- **Hypogea2015, International Congress on Artificial Cavities**
11-17 March 2015 (Rome, Italy), <http://hypogea2015.hypogea.it/>
- **Congress of the 75th Anniversary of the Cuban Speleological Society**
13-17 April 2015 (Camagüey, Cuba). Contact: Angel Graña Gonzalez: grana.angel@gmail.com; angel@fanj.cult.cu
- **13th Conference of Cave Rescue Commission of UIS**
16-19 April 2015 (Le CAMP, Vaumarcus, Switzerland). The name of this conference is RISS, www.riss2015.ch
- **Conference "Crystallography for the Next Generation: the Legacy of IYCr"**
22-24 April 2015, Rabat, Morocco, <http://www.iycr2014.org/legacy/conference>
- **Environmental Safety and Construction in Karst Areas**, 26-29 May 2015 (Perm, Russia)
<http://karst.psu.ru/part-request> (scroll down and you'll find information in English).
- **EuroSpeleo Forum 2015 and XXII Italian National Congress of Speleology**
30 May - 2 June 2015 (Pertosa-Auletta, Italy), <http://www.congressospeleo2015.org/english/index>
- **23rd International Karstological School and UIS 50th Anniversary Celebration**
15-19 June 2015 (Postojna, Slovenia), <http://iks.zrc-sazu.si/en/index.html>
- **33rd Congress of the Brazilian Speleological Society**
15-19 July 2015 (Eldorado, São Paulo, Brazil), <http://www.cavernas.org.br/33cbe.asp>
- **KG@B, International Conference on Groundwater in Karst**
20-26 June 2015 (Birmingham, UK), <http://www.birmingham.ac.uk/generic/kgatb/index.aspx>
- **NSS Convention**, 13-17 July 2015 (Waynesville, Missouri, USA); <http://nss2015.caves.org/>
- **13th Symposium on Pseudokarst**
16-19 September 2015 (Beskydy Mts. / Outer Western Carpathians, Czech Republic), <http://www.pseudokarst.de.vu/>
- **14th Multidisciplinary Conference on Sinkholes and the Engineering and Environmental Impacts of Karst**, 5-9 October 2015 (Rochester, Minnesota, USA), <http://www.sinkholeconference.com/>
- **Asian Conference on Speleology**, October 2015 (China).
- **National Cave and Karst Management Symposium**
19-23 October 2015 (Cave City, Kentucky, USA), <http://nckms.org/>
- **Geological Society of America (GSA) Convention**
1-4 November 2015 (Baltimore, Maryland, USA), <http://www.geosociety.org/>
- **International Scientific and Practical Conference - "Protected Karst Territories - Education and Training"**
23-26 September 2015, Sofia, Bulgaria), <http://www.prokarstterra.bas.bg/forum2015>
For contacts: forum2015@prokarstterra.bas.bg; forum2015@abv.bg
- **Third International Competition "Karst under protection – gift for the future generations"**
For contacts: forum2015_competition@prokarstterra.bas.bg
For the latest information: <http://www.prokarstterra.bas.bg/forum2015>



23rd International Karstological School “Classical Karst”

Caves – Exploration and Studies

combined with the

50th Anniversary of the International Union of Speleology-UIS



POSTOJNSKA JAMA
CAVE-GROTTE-HÖHLE

Postojna, Slovenia, June 15th to 20th 2015



FIRST CIRCULAR

TOPIC AND GOALS

The International Karstological School “Classical Karst” has been conducted annually since 1993.

Different aspects of karst studies are presented each year. The basic objectives are to present the state-of-the-art in the selected topic, and encourage discussions related to the school’s topic through lectures, poster presentations and field trips in the Classical Karst of Slovenia.

The first days of the 23rd Karstological School will be devoted to the exploration and scientific study of caves. Caves play an important role in human history. They were used as shelters and dwellings by early people; they were places of anxiety, mystery, religion, fear, curiosity, adventure, and also knowledge. People have explored caves for thousands of years, but the first systematic exploration and realistic descriptions are from the 17th Century.

In the 19th Century, when many of the natural sciences were forming, cave exploration by individuals and caving societies laid the foundations of speleology as we understand it today—where cave exploration,

mapping and science work hand-in-hand for new, better, understanding of caves.

Last day of the School (Friday) will be dedicated to the 50th Anniversary of International Union of Speleology – UIS. UIS was established during the 4th International Congress of Speleology, which was held in Ljubljana and Postojna in 1965. The UIS was officially founded during the Closing Ceremony of the Congress on September 16th in Ljubljana.

We invite all speleologists, karstologists, experts and young scientists, students, cavers and all persons attracted by caves and karst to participate at this School.

The topics of this year’s School are:

- Cave science
- Open exploration frontiers; big cave systems
- History of cave exploration in Central Europe – “ALCADI”
- History of the International Union of Speleology and the future of speleology
- Other topics related to caves and karst

PROGRAM OUTLINE

	June 15	June 16	June 17	June 18	June 19	June 20	June 21
	MON	TUE	WED	THU	FRI	SAT	SUN
Morning	-Registration -Opening of event CAVE SCIENCE -Invited lectures -Lectures of participants	OPEN EXPLORATION FRONTIERS; BIG CAVE SYSTEMS -Invited lectures -Lectures of participants	HISTORY OF CAVE EXPLORATION IN CENTRAL EUROPE – »ALCADI« -Invited lectures -Lectures of participants	Whole-day field trip Classical Karst: <u>Škocjanske jame</u> UNESCO, cave entrances to underground river <u>Reka</u> , <u>Grotta Gigante</u> springs of <u>Timava</u>	UIS DAY - Invited lectures - Visit of <u>Postojnska jama</u> cave	UIS Bureau meeting Cave visits (organized by JZS)	UIS Bureau meeting
Afternoon/evening	- Lectures of participants - Poster session - Karst mysteries -Institute reception	-Field trip: cave <u>Planinska jama</u> , <u>Rakov Škocjan</u> , <u>Cerkniško polje</u> (entrance to cave <u>Karlovice</u>)	-Field trip: cave <u>Vilenica</u>		- 50 th Anniversary of UIS; celebration in the cave <u>Postojnska jama</u> - Reception in front of the cave	UIS Bureau meeting	

KEYNOTE LECTURES

Prof. Dr. Derek Ford, Canada:

The four state model of meteoric water cave genesis and its integration with models of the development of plan patterns of passages

Andy Eavis, UK:

Explorations of big cave systems

Acad. Prof. Dr. Andrej Kranjc, Slovenia:

“Classical Karst” exploration history

Dr. Trevor Shaw, UK:

History of cave science

Prof. Dr. Arrigo Cigna, Italy:

UIS history

Other

Invited lectures

Thematic lectures

Poster presentations

Detailed program will be available on website

<http://iks.zrc-sazu.si> from 1 June 2015.

TECHNICAL & REGISTRATION INFORMATION

The official languages of the School are English and Slovenian.

The regular registration fee for the whole week (15 – 19 June) is 150 EUR.

The registration fee for young students is 50 EUR (confirmation required; under 30 years of age).

Registration for the School includes: printed materials, excursions, organized tourist visit of cave Postojnska jama, refreshments during coffee breaks, attendance at the reception at the Karst Research Institute, celebration of the UIS 50th Anniversary in the cave, and the banquet.

The registration fee only for the UIS Day Celebration (Friday, 19 June) is 50 EUR and includes printed material, an organized tourist visit of the cave Postojnska jama, lectures, UIS 50th Anniversary activities in the cave, and the banquet. On Saturday, 20 June, free visits to selected “wild” caves will be available, guided by cavers from local speleological clubs – members of Speleological Association of Slovenia.

Registration is possible only online and will be open from 15 December 2014 until 15 May 2015 for School and until 1 June 2015 for UIS day.

Please register yourself, even if you are invited lecturer or one of the organizers, to ensure you get a BADGE!

According to the limited place in the Cultural Centre and in the cave, please sign up as soon as possible, because when capacity will be full, we will close registration!

Abstracts in English are submitted at the registration. Participants should indicate the preferred type of presentation (oral/poster), but the final decision will be made by the organizers. Abstracts will be published together with the Program and Guidebook. Selected presentations may be published in the journal *Acta Carsologica*.

The fee must be paid no later than 15 May 2015 for the School and by 1 June 2015 for UIS Day!

Because of high bank wire transfer fees, if you are coming as part of a group, we suggest paying once for the group, but please specify the individuals covered by the payment:

IBAN: SI56 01100 6030347346

SWIFT: BSLJSI2X Reference: 41139 -23

Our address: ZRC SAZU, Novi trg 2, 1000

Ljubljana Bank address: BANKA SLOVENIJE, Slovenska cesta 35, SI-1000 Ljubljana, Slovenia

If you have any problems with payment, please contact us by e-mail: iks@zrc-sazu.si

NOTE:

No School materials and admission to excursions, reception, celebration, or banquet will be available without your official registration BADGE!!!

ORGANIZERS

International Karstological School “Classical Karst”:

Karst Research Institute ZRC SAZU

Titov trg 2, SI-6230 Postojna, Slovenia

T: +386 5 700 1900 F: +386 5 700 1999

E: iks@zrc-sazu.si

Web: <http://iks.zrc-sazu.si>

UIS 50th ANNIVERSARY

International Union of Speleology-UIS & Karst Research Institute ZRC SAZU

Titov trg 2; SI-6230 Postojna, Slovenia

CO-ORGANIZER OF UIS 50th ANNIVERSARY

Management of Postojnska jama d.d.
Jamska cesta 30, 6230 Postojna, Slovenia
Web: <http://www.postojnska-jama.eu/>

THE 23rd INTERNATIONAL KARSTOLOGICAL SCHOOL "CLASSICAL KARST" IS SUPPORTED BY

- Slovenian National Commission for UNESCO
- Scientific Research Centre of the Slovenian Academy of Sciences and Arts
- Slovenian Academy of Sciences and Arts
- Municipality of Postojna
- Škocjanske jame Park
- Grotta Gigante
- JZS – Speleological Association of Slovenia

CONTACT PERSON

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ORGANIZING COMMITTEE

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PROGRAM COMMITTEE

Nadja Zupan Hajna, Andrej Mihevc, Andrej Kranjc, Franci Gabrovšek, Pavel Bosák

LOCATION

Postojna, Slovenia

(1) Karst Research Institute ZRC SAZU,
Titov trg 2, 6230 Postojna
Reception at the Institute

(2) Cultural Centre of Postojna,
Gregorčičev drevored 2, 6230 Postojna
Registration & Scientific program (Lectures & Posters)

(3) Cave Postojnska jama
UIS 50th Anniversary celebration
& Banquet & Tourist visit

TRANSPORTATION FROM AIRPORTS

You can book your transportation from various

airports to Postojna and back through the travel agency Kompas Postojna, which offers competitive prices. For more information, contact the agency by e-mail: accommodation@kompas-postojna.si

ACCOMMODATION FOR PARTICIPANTS

The participants (except invited lecturers and UIS Bureau members) are asked to book their accommodations through the travel agency Kompas Postojna. The agency has special prices for participants of the UIS Anniversary and School if you book your accommodations by 1 February 2015.

There are several possibilities for accommodations: **Hotel Kras** (in front of the Institute), **Sport Hotel** (close to the Culture Centre), **Youth Hostel Proteus** (close to the Institute), **Camping Pivka jama** (5 km from Postojna; camp and bungalows), **private apartments and rooms** (in Postojna).

More information on the accommodations is available on the School's website: <http://iks.zrc-sazu.si/>

For booking and information please contact the following address:

KOMPAS POSTOJNA, d.o.o., travel agency

Titov trg 2a, Postojna, Slovenia

Phone: (00) 386 5 7211480

Fax: (00) 386 5 7211487

Contact persons: Masa, Azra, Mateja

e-mail: accommodation@kompas-postojna.si

PLACES TO EAT

(1) Proteus Restaurant

With all sorts of food and a daily menu. On Postojna's main square, next to the Institute.

(2) Bar Bor

Traditional local daily meals. Good and cheap. On the corner of Postojna's main square; across the street from the Hotel Kras.

(3) Pizzeria Čuk

Located in the Sport Park. Although known as pizzeria, they also serve good pasta and other food, including salad bar and a daily menu.

(4) Pizzeria Minutka

Pizzeria with other items, "Balkan" food, and a daily menu.





17th International Congress of Speleology, Sydney 2017



Sydney, Australia, 23-30 July 2017

CAVES IN AN ANCIENT LAND

By Nicholas White

nicholaswhite@netspace.net.au

The theme chosen for the Congress captures features of the Australian landscape evident in its caves and karst. Proterozoic dolomites (1.4 – 1.8 billion years old) in Australia had not been explored by speleologists until 25 years ago but have now been shown to have significant caves. Jenolan Caves are rightly celebrated as beautiful and one of the first tourist caves to be electrically lit.

More recent discoveries at Jenolan demonstrate their antiquity. Mineralization of sediments in the Jenolan Caves has been shown to be 340 million years old, demonstrating the caves were open at this time. Very much younger caves formed in carbonate dunes on the southern coast have shown that dunes less than 250,000 years old contain caves several kilometers in length.

Karst research in Australia has been rejuvenated with the application of many new techniques. New dating methods show that there are Nullarbor speleothems up to 10 million years old.

At Chillagoe in North Queensland, detailed studies of speleothems have been done which correlate cyclone (hurricane or typhoon) events in the past 100 years with contemporary historical accounts of damage in coastal areas.

The frequency of such events are important in understanding climate patterns and frequency of such events and to manage the risks from them. Other studies from Southern Australia and New Zealand are elaborating climate histories for comparison

with the Northern Hemisphere climate records.

The original descriptions of the marsupial megafauna of Australia were from cave deposits from Wellington, NSW by Sir Richard Owen in the nineteenth century. Caves continue to provide bones to elaborate this history.

The Nullarbor caves have had megafauna dated at 3.5 million belonging to animals reliant on trees no longer present.

The World Heritage Area at Naracoorte Caves in South Australia has contributed to these paleontological studies. The marsupial megafauna is now better known from the study of cave deposits.

These themes of modern speleological study will form part of the Seminar program at the Congress and will be integrated with other exciting new areas of speleological investigation across the world.



The magnificent city of Sydney, Australia

The Organising Committee recently hosted the UIS Bureau who toured the Penrith Panthers Congress Facilities and were presented with some of the Congress planning to date. These include plans for the Congress itself, a partners program, a mid-week trip to Jenolan caves plus pre and post congress field trips and caving camps.

Detailed information will be provided on the website during 2015.

The organizing committee is particularly interested in ideas for the scientific program or inquiries about registration, trip planning etc.

Contact via email: speleo2017@caves.org.au.

Further information: www.speleo2017.caves.org.au



Jenolan Caves is Australia's most awe-inspiring cave system. A spectacular natural wonder on the western edge of the Blue Mountains.



Naracoorte Caves National Park, South Australia

An World Heritage site that preserves Australia's most complete fossil record for the past 500000 years.

© <http://www.vietmytourist.com/tour-nuoc-ngoi/uc%20chau.html>



Blue Mountains National Park - Stunning views 80 km from Sydney



UIS Bureau Meeting in Sidney - November 2014

EDITOR'S DISCLOSURE

UIS Bulletin, nor its editors are responsible for:

- misspellings
- wrongly written names
- incorrect articles
- typographical mistakes

Every effort possible has been made to keep all articles as close to the original version. In some cases, the editors review the structure in order to present the article in a clear and consistent manner and obvious errors are corrected if found.

We appreciate your understanding.

Should you have any comments, please send them to:

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UIS BULLETIN



UIS
Union Internationale
de Spéléologie