

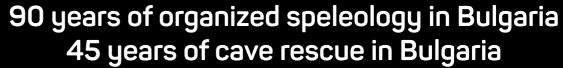
EuroSpeleo Forum 2019 is financially supported by the KP-06-MNF-12 (15.07.2019) contract between the National Science Fund - Bulgaria and the Geological Institute of Bulgarian Academy of Sciences.



TH EUROSPELEO FORUM

26-29 September Sofia, Bulgaria esf2019.speleo-bg.org







esf2019.speleo-bg.org







13TH EUROSPELEO FORUM

2019 SOFIA. BULGARIA

esf2019.speleo-bg.org

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



13TH EUROSPELEO FORUM 2019 SOFIA. BULGARIA

esf2019.speleo-bg.org

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

Issued by:

Bulgarian Federation of Speleology www.speleo-bg.org bfs@speleo-bg.org

Bulgarian Federation of Speleology Vasil Levski Blvd. 75 1142 Sofia, Bulgaria

Editorial team on writing, information gathering, and design of the content:

Antoniya Vlaykova, Angel Ivanov, Stanimira Deleva, Tsvetan Ostromski, Yavor Shopov

Cover photos:

Big entrance of Prohodna cave, descending with flags during celebration of 85 years anniversary of organized speleology in Bulgaria, 2014. Photo Tsvetan Ostromski

Cave Rescue Exercise in Balabanova dupka Cave during 11th European Cave Rescue Meeting in Bulgaria, 2017. Photo: Sigurður Ólafur Sigurðsson

Prohodna cave – "Oknata" geological phenomena. Photo: Yavor Shopov

Design of the cover: Antoniya Vlaykova
Print design: Svetla Tihova

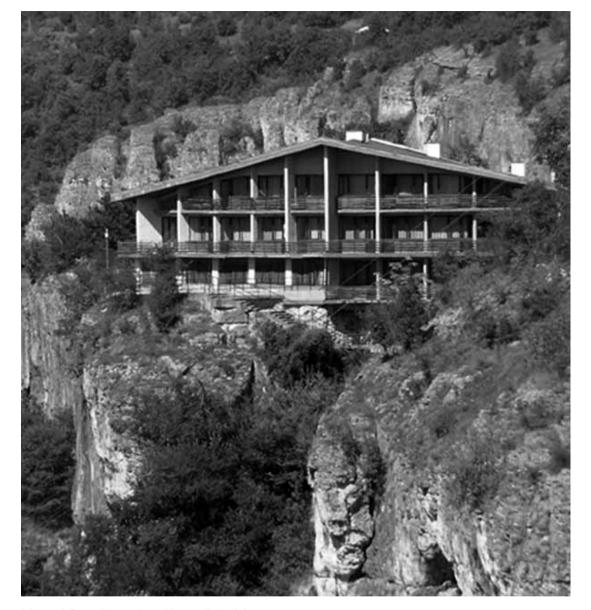


NATIONAL
SCIENCE
EuroSpeleo Forum 2019 is financially supported by the KP-06-MNF-12 (15.07.2019) contract between the National Science Fund - Bulgaria and the Geological Institute of Bulgarian Academy of Sciences.

CONTENTS

90 YEARS OF ORGANIZED SPELEOLOGY IN BULGARIA (A brief history and main achievements of Bulgarian cavers and speleology)	The longest lava tube caves of Southeast Asia - Tan Phu and Krong No Volcanic in southern Vietnam
organizations	SCC Akademic – Sofia
45 YEARS OF CAVE RESCUE IN BULGARIA 19 First Period (1964 – 1973)	Recent speleological explorations in NW Vratsa Mountain
CAVE RESCUE25 History of UIS Cave Rescue Commission25	common hardware48 Karst and Speleology in the South Caucasus of Armenia49 Karst and Cave Conservation in Myanmar51
CAVE EXPLORATION & EXPEDITIONS	CAVE GEOLOGY, GEOMORPHOLOGY AND GEOGRAPHY OF KARST52
Sedom salt diapir, Dead-Sea, Israel	Wonders and remarks of Bulgarian caves and karst
(2009-2019)	Morphological analysis of 3D subsurface structures with the use of a handheld laser scanning system. The case study of Koutouki Cave, Peania, Greece
to the Serra da Bodoquena, SW Brazil35 Explorations of the Balkan Caves - Devon Caving club	"The Caves" - the first periodical on karst and caves in Russia

CAVE BIOLOGY / BIO SPELEOLOGY59	The International Program on "Techniques
Study of the nutrient contribution of cave bat	for Remote Location of Caves" (RLC) of the International Union of Speleology (UIS) and
colonies to surface ecosystems60	Bulgarian project related to it79
Underground Habitats as a Unit for	Remote Location of Caves by Thermal
Conservation of Vulnerable Bat Communities in South-Western Kyrgyzstan61	Cameras80
Biospeology in Kyrgyzstan62	Remote Location of Caves on Mars and the
	Moon - First Step to the Settlement on other
Intelligent Virtual Personal Assistant for Bat Scientists63	Planets81
Biospeleology in Germany Methods to increase	First Application of Near Infrared Imaging for
public and specialist interest64	Remote Location of Caves82
Microbial life in Brazilian caves: reporting the	Development of Technology for Remote
structure of bacterial communities65	Location of Unknown Underground Cavities and Deep-Seated Rockslides by Unmanned Air
Humidophila brekkaensoides (Bock) Lowe,	Systems (UAS)83
Kociolek, J.R.Johansen, Van de Vijver, Lange-	Symposium "Cave Climate and Paleoclimate –
Bertalot & Kopalová: aerophytic diatom from the	Best Record of the Global Change IV"84
caves of Serbia67	On the Possibility to use 13C Speleothem
Samar Cave: seasonal analysis of phototrophic	Records for Determination of Total Freezing of
microorganisms, ecological and biofilm	the Ground during Glaciations84
parameters68	The role of Heinrich 5 climatic event on human
CAVE PROTECTION69	migration: A high resolution speleothem record from southern Turkey85
Clean Up The Dark - a Proposal For a	Overview of environmental research in
European Network For Cave Cleaning And	Croatian karst and its implications for
Protection70	paleoenvironmental reconstructions86
Mapping and valuing karst underground	Age Determination of Speleothems from
geodiversity in cave Lokvarka, Croatia71	Mishin Kamik Cave, NW Bulgaria87
Introduction of schoolchildren to field work on	Solar activity effects on cave temperature
karst and caves72	regimes during five solar cycles
6 th EuroSpeleo Protection Symposium	(1968 - 2018)88
"Underground Biotope and Geotope; Best Practice of Protection"	Main physical processes and phenomena
	causing periodic changes in the cave microclimate89
Karst and Cave Conservation within the Sustainability Goals of the United Nations74	2 nd EuroSpeleo Show Cave Symposium90
Book about caves and karst of Costa Rica75	Show caves of the Czech Republic – what
Book about caves and karst of Costa nica73	visitors do not see90
SYMPOSIA 76	Show caves in Bulgaria a s objects for study
Symposium on "Techniques for Remote	trips and expeditions of students in tourist
Location of Unknown Underground	specialties91
Cavities"	Symbols, myths, and images of the underworld
Tracing of the Groundwater Flowing out of	in the arrangement and operation of show
Kolkina dupka Cave, Zimevitsa, Bulgaria77	caves
Dye Tracing Below the Visibility Threshold78	PROGRAM 26-29 September 2019 95



National Caving House "Petar Tranteev", Karlukovo

90 years of organized speleology in Bulgaria

(A BRIEF HISTORY AND MAIN ACHIEVEMENTS OF BULGARIAN CAVERS AND SPELEOLOGY)

SAMAR CAVE: SEASONAL ANALYSIS OF PHOTOTROPHIC MICROORGANISMS, ECOLOGICAL AND BIOFILM PARAMETERS

Authors:

Slađana Popović¹, Jelena Krizmanić², Danijela Vidaković³, Olga Jakovljević, Ivana Trbojević, Dragana Predojević, Milka Vidović¹, Gordana Subakov Simić²

Section:

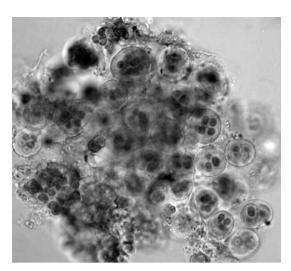
Cave Biology / Bio speleology

Type:

Poster Presentation

Abstract:

Cyanobacteria and algae, ecological, and pa- with Cyanobacteria according to PCA. rameters of biofilm developed at rock substratum at the entrance of Samar Cave (Serbia), Short bio of the presenter: were analysed seasonally. Of 141 taxa, Cyano- Slađana Popović acquired PhD in Biological Scibacteria were dominant (coccoid forms prevailed - the most diverse was Gloeocapsa), followed was higher in December and March, lower in show caves. May and August. Chl a values and biofilm water Slađana Popović is member of International Socontent had the same trend and were correlated



ences, Algology. Her research focus on exploration and monitoring of biofilms, cyanobacteria by Bacillariophyta, then Chlorophyta. Diversity and algae at cave entrances and lampenflora in

ciety for Subterranean Biology



CAVE PROTECTION

68

¹ University of Belgrade, Scientific Institution, Institute of Chemistry, Techno