



The 3rd International meeting SOS Proteus: CONSERVATION OF PROTEUS AND ITS HABITAT – 250 YEARS AFTER ITS SCIENTIFIC DESCRIPTION

Organised upon the 250th anniversary of the taxonomic description of *Proteus anguinus*,
in partnership with the Škocjan Caves Park, Slovenia,

*under the honorary patronage of
His Excellency the President of the Republic of Slovenia Mr. Borut Pahor,*

at the Promotion and Congress centre of the Škocjan Caves Park, Slovenia,
Matavun, Slovenia, on 14th April 2018.

DETAILED PROGRAM

Morning session		
8.00 – 8.45	Registration of participants	
8.45 – 8.55	Opening of meeting and welcome speeches	Stojan Ščuka, <i>Director of Škocjan Caves Park, Slovenia,</i> Vanja Debevec, <i>Organizing committee, Škocjan Caves Park, Slovenia</i> Gregor Aljančič, <i>Head of Tular Cave Laboratory</i>
8.55 – 9.20	<i>Keynote lecture:</i> Short history of Slovenian Karst	Andrej Kranjc <i>Slovenian Academy of Sciences and Arts, Slovenia</i>
9.20 – 9.45	<i>Keynote lecture:</i> 250th anniversary of the taxonomic description of <i>Proteus anguinus</i>	Boris Sket <i>Department of Biology, Biotechnical Faculty, University of Ljubljana, Slovenia</i>
CONSERVATION (HABITAT)		
Chair: Tanja Pipan		
9.45 – 10.00	The problem of cave pollution in Kras Plateau, Slovenia	Jure Tičar & Daniela Ribeiro <i>Anton Melik Geographical Institute, ZRC SAZU, SI</i>
10.00 – 10.15	The threshold concentration for nitrate for groundwater as a habitat of proteus	Boris Kolar <i>National Laboratory of Health, Environment and Food, SI</i>
10.15 – 10.30	How microbial communities clean up the home of proteus	Lada Lukić Bilela^{1,2} & Roman Ozimec³ <i>¹Department of Biology, Faculty of Science, University of Sarajevo, BA; ²Biospeleological Society in Bosnia and Herzegovina, BA; ³ADIPA – Croatian Society for Research and Conservation of Natural Diversity, HR</i>
10.30 – 10.45	Coffee break	

CONSERVATION (MANAGEMENT & HEALTH)		
Chair: Federica Papi		
10.45 – 11.00	Non-destructive methods for assessing health and physiological stress in <i>Proteus anguinus</i>	Tajda Gredar , Patrik Prša & Lilijana Bizjak Mali <i>Department of Biology, Biotechnical Faculty, University of Ljubljana, SI</i>
11.00 – 11.15	Reproductive abnormalities and sex-chromosomes in proteus	Lilijana Bizjak Mali ¹ & Stanley K. Sessions ² ¹ <i>Department of Biology, Biotechnical Faculty, University of Ljubljana, Slovenia;</i> ² <i>Department of Biology, Hartwick College, US</i>
11.15 – 11.30	Managing the reproduction of <i>Proteus anguinus</i> in captivity for conservation aims	Olivier Guillaume <i>Moulis Subterranean Laboratory, CNRS, FR</i>
11.30 – 11.45	Olms at the German Hermann's Cave – a threatened species held in captivity for more than 80 years	Susanne Holtze ¹ , Anne Ipsen ^{2,3} , Maja Lukač ⁴ , Ivan Cizelj ⁵ , Ana Čurić ⁶ , Dušan Jelić ⁷ , Branko Jalžić ⁸ , Claudia A. Szentiks ¹ , Thomas B. Hildebrandt ¹ ¹ <i>Leibniz Institute for Zoo and Wildlife Research, DE;</i> ² <i>German Speleological Federation VdhK;</i> ³ <i>Fledermaus-Zentrum GmbH, DE;</i> ⁴ <i>Faculty of Veterinary Medicine, University of Zagreb, HR;</i> ⁵ <i>Zagreb Zoo, HR;</i> ⁶ <i>"ATRA" Herpetological Association, BA;</i> ⁷ <i>Croatian Institute for Biodiversity, HR;</i> ⁸ <i>Croatian Biospeleological Society, HR</i>
11.45 – 12.00	The Trebinje Proteus Observatorium and Proteus Rescue & Care Facility", Trebinje, Bosnia & Herzegovina	Brian Lewarne <i>Devon Karst Research Society, UK</i>
12.00 – 12.45 POSTER SESSION		
Chair: Anne Ipsen		
	Techniques of investigation in the 250 years of studies on <i>Proteus anguinus</i>	Federica Papi ¹ , Edgardo Mauri ¹ & Lucia Mancini ² ¹ <i>Speleovivarium "Erwin Pichl", IT;</i> ² <i>Elettra-Sincrotrone Trieste S.C.P.A., IT</i>
	Environmental DNA in conservation of Dinaric Karst groundwater biodiversity	Špela Gorički <i>Scriptorium biologorum – Biološka pisarna, SI</i>
	Finds of washed-out proteus from the Pivka Intermittent Lakes and the Pivka River, Slovenia	Tina Kirm <i>Zagorje 33, 6257 Pivka, SI</i>
	Observed distribution patterns and population densities of <i>Proteus anguinus</i> in Croatia	Dušan Jelić ¹ & Petra Kovač Konrad ² ¹ <i>Croatian Institute for Biodiversity, Biota d.o.o., HR;</i> ² <i>Association Hyla, HR</i>
	Further eDNA evidence on distribution of proteus in Montenegro	Gregor Aljančič ¹ , Magdalena Năpăruș-Aljančič ¹ , Miloš Pavićević ² , Tajda Turk ¹ & David Stanković ^{1,3} ¹ <i>Tular Cave Laboratory, Society for Cave Biology, SI;</i> ² <i>Biospeleological Society of Montenegro, ME;</i> ³ <i>Marine Biology Station, National Institute of Biology, SI</i>
	Capacity building for conservation of the endangered subterranean biodiversity of the cross-border Skadar/ Shkodra Lake Basin (Montenegro and Albania)	Magdalena Năpăruș-Aljančič ¹ , Miloš Pavićević ² , Leonid Merzlyakov ² , Tajda Turk ¹ , Philippe Theou ³ , Denik Ulqini ⁴ , Spase Shumka ⁵ & Gregor Aljančič ¹ ¹ <i>Tular Cave Laboratory, Society for Cave Biology, SI;</i> ² <i>Biospeleological Society of Montenegro, ME;</i> ³ <i>Dept. of Biology, Faculty of Natural Sciences, University of Tirana, AL;</i> ⁴ <i>Dept. of Biology and Chemistry, Univ. of Shkodra, AL;</i> ⁵ <i>Faculty of Biotechnology and Food, Agricultural University of Tirana, AL</i>
	Karst landscape and outline of cavefishes in Yunnan, China	Hong Liu & Junxu Chen <i>International Joint Research Center for Karstology, Yunnan University, CN</i>
13.00 – 14.30 Lunch break		

Afternoon session		
RESEARCH HIGHLIGHTS & PERSPECTIVES		
Chair: Lilijana Bizjak Mali		
14.30 – 14.45	Extreme site fidelity and low genetic variability of <i>Proteus anguinus</i> in Vruljak 1 Cave (East Herzegovina, RS, BiH)	<u>Gergely Balázs</u> ^{1,2} , Gábor Herczeg ¹ & Judit Vörös ³ ¹ Eötvös Lóránd Science University, HU; ² Caudata Cave Research Group, HU; ³ Hungarian Natural History Museum, HU
14.45 – 15.00	Secondary contact and limited hybrid zone of two distinct proteus lineages in the subterranean Reka River	<u>Valerija Zakšek</u> , Grega Makovec & Peter Trontelj Department of Biology, Biotechnical Faculty, University of Ljubljana, SI
15.00 – 15.15	Presentation of the “ <i>Proteus</i> genome project”	<u>Rok Kostanjšek</u> ¹ , Lars Bolund ^{2,3} , Duncan Yu ^{2,3} , Yongjun Luo ⁴ & Nina Gunde-Cimerman ¹ ¹ Department of Biology, Biotechnical Faculty, University of Ljubljana, SI; ² Lars Bolund Institute for regenerative medicine, CN; ³ University of Aarhus, DK; ⁴ BGI International, CN
EDUCATION		
Chair: Vanja Debevec		
15.15 – 15.30	Film as a tool in raising public awareness on vulnerability of proteus	<u>Ciril Mlinar</u> Water Cycle Institute, SI
15.30 – 15.45	“Dangerous life of proteus” – educational computer video game	<u>Marco Mauri</u> , Edgardo Mauri & Federica Papi Speleovivarium “Erwin Pichl”, IT
15.45 – 16.00	Coffee break	
DISCUSSIONS, CONCLUSIONS AND NEXT STEPS		
Chair: Magdalena Aljančič		
17.00 – 19.00	Cultural program, reception at the Škocjan Caves Park, Slovenia	

15th April	Škocjan Caves Guided Tour (at 10.00, 12.00 or 13.00; info at reception desk)
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Organizing committee: Vanja Debevec, Magdalena Năpăruș-Aljančič, Tajda Turk and Luka Vodnik.
Program committee: Peter Trontelj, Olivier Guillaume and Gregor Aljančič.

LANGUAGE of presentations: Slovene, English (preferable).

FURTHER INFORMATION

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VENUE: [Promotion and Congress centre of the Škocjan Caves Park, Slovenia](#)



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TRAVEL INFORMATION

<http://www.park-skocjanske-jame.si/en/read/tourist-information/how-to-reach-us>

PARKING

Please, use the **parking area at the Park's Information Centre**, and follow the designated path to the Promotion and Congress centre (5 min walking distance).

Thank you in advance for your participation and valuable contribution at the meeting, we are already looking forward to welcoming you at the Škocjan Caves Park, Slovenia.

Stojan Ščuka,
 Director of Škocjan Caves Park, Slovenia

Gregor Aljančič,
 Head of Tular Cave Laboratory