



## The 3<sup>rd</sup> International meeting *SOS Proteus*: CONSERVATION OF PROTEUS AND ITS HABITAT – 250 YEARS AFTER ITS SCIENTIFIC DESCRIPTION

Upon the 250<sup>th</sup> anniversary of the taxonomic description of *Proteus anguinus* Laurenti 1768,  
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 14<sup>th</sup> April 2018.

### DETAILED PROGRAM

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

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

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

<b>15<sup>th</sup> April</b>	<b>Škocjan Caves Guided Tour</b> (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