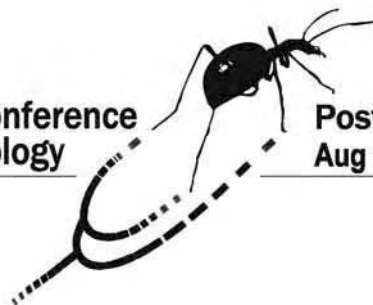


20th International Conference
on Subterranean Biology

Postojna, Slovenia
Aug 29 - Sept 3, 2010



PROGRAM

of the 20th International Conference on Subterranean Biology

Postojna, Slovenia

29 August – 3 September 2010

Main conference venue: Jamski dvorec, Jamska cesta 30, 6230 Postojna

Sunday evening welcome reception: Karst Research Institute at ZRC SAZU, Titov trg 2, 6230 Postojna



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MAP OF POSTOJNA WITH IMPORTANT SITES



1. Postojnska jama/Postojna cave & Jamski dvorec
2. Karst Research Institute at ZRC SAZU
3. Parking place at Postojnska jama reserved for participants
4. Parking place in front of the PTC Primorka building, meeting place for Mid-Conference Excursion
5. Railway station
6. Hotel Šport
7. Hotel Kras
8. Camping Pivka jama
9. Restaurants near Postojnska jama
10. Pizzeria Minutka
11. Restaurant Špajza
12. Restaurant Bar Bor
13. Pizzeria Čuk
14. Restaurant and pub Erasmus
15. Restaurant Ob kaminu

GENERAL INFORMATION

The conference will take place at

Jamski dvorec (Jamska cesta 30, Postojna; No. 1 on the map)

and

Karst Research Institute at ZRC SAZU (Titov trg 2, Postojna; No. 2 on the map; Sunday evening welcome reception only).

Registration

Registration is on Sunday 29 Aug from 17:00 hours onward at the Karst Research Institute (No. 2 on the map - see page 2), or every conference day, except Wednesday, from 8:00 onward at the registration desk in the main conference venue Jamski dvorec. Extra tickets for single events and single day registration fees can be paid directly at the registration desk. If you wish to purchase extra meals please let us know at least two days in advance.

Lunch

- Lunches are organized during the conference and are included in the registration fee. Lunch tickets will be handed out at the registration.
- Dinner will be organized on Wednesday 1 Sep (at the excursion) and on Friday 3 Sep (conference dinner).
- During breaks, non-alcoholic beverages and refreshments will be served.

Other places to eat

- **Restaurants near Postojnska jama** (Jamska cesta; No. 9 on the map): They serve fast food, daily menu, and a la carte menu.
- **Pizzeria Minutka** (Ljubljanska cesta 14; No. 10 on the map): Nice restaurant with pizza, pasta, excellent Balkan food and daily menu.

- **Restaurant Špajza** (Ulica 1. maja 1; No. 11 on the map): For those looking for fine ambience and food.
- **Restaurant Bar Bor** (Tržaška cesta 2A; No. 12 on the map): They serve daily meals.
- **Pizzeria Čuk** (Pot k Pivki 4; No. 13 on the map): Restaurant in the Sport park with plenty of space. Although called a pizzeria, they also serve good pasta, Balkan food, traditional local and “global” food, salad bar and daily menu.
- **Restaurant and pub Erasmus** (Hotel Epicenter, Kazarje 10; No. 14 on the map): Traditional Slovene dishes, pizzas, pasta, risottos and a big salad bar.
- **Restaurant Ob kaminu** (Tržaška cesta 88; No. 15 on the map): They serve pizzas, pasta, Balkan food, grill food, sea food.

Visit to the Postojna Cave (Monday 30 Aug)

We will meet at 19:00 hours in front of the cave entrance, which is located next to Jamski dvorec. A guided cave tour via the regular tourist path will take about one hour. No special gear is required, but please consider that the temperature in the cave is about 10 degrees Celsius.

Visit to the Vivarium Proteus (Tuesday 31 Aug, Thursday 2 Sep)

Visits to the speleobiological vivarium will be organized in two smaller groups. Lists of the two groups will be displayed at the conference announcement board in Jamski dvorec. We will meet at 19:10 hours in front of Jamski dvorec.

Mid-conference excursion (Wednesday 1 Sep)

- Please confirm your participation in the excursion at the time of registration. Later registrations will be accepted till Monday 30 Aug.

- Buses will depart from the public parking place in front of "PTC Primorka" building (Novi trg 6, Postojna; No. 4 on the map) **exactly at 7:30 hours**.
- Walking shoes are required, light hiking gear is recommended. Be prepared for rainy weather and for temperatures around 12 degrees Celsius in the cave. A flashlight or headlamp will be useful for evening walks in the Park Škocjanske jame.
- Insect repellents are recommended as we will be walking in areas populated with ticks (*Ixodes ricinus*) that potentially transmit lyme disease and tick-borne meningitis.
- Water and snacks will be available on the busses.
- All transportation and admittance costs, lunch, dinner, and basic insurance during the excursion are included in the registration fee.

INSTRUCTIONS FOR SPEAKERS, CHAIRPERSONS AND POSTER PRESENTERS

Oral presentations

- The lecture room and time slot of each talk can be seen in the programme. Please respect strictly the **time limit of 15 minutes per presentation**. Five minutes are available for discussion after each presentation.
- Standard MS PowerPoint presentations on a USB memory stick should be handed to the person in charge at the presentation computer at least 15 minutes before the start of your **session**. If you use other presentation formats or older versions of MS PowerPoint, please check that your presentation runs smoothly on the presentation computer.
- If you need an overhead projector (transparencies) please let us know at least one day beforehand. A 35 mm slide projector will **not** be available.

Chairpersons

- Have the very important task of assuring that the program proceeds exactly according to the time plan. Only this way will the lectures in the parallel sessions be synchronized. You are authorized to stop a speaker if he exceeds his time limit.

- Please check the contents of your session, the speakers, and the location well before the time of the session.
- Introduce each speaker and the title of his lecture briefly. There is no time to give a detailed account of the speaker and his topic.
- After each talk questions are welcome if there is enough time available.

Posters

- Posters can be hung on Monday 30 Aug at any time. They will be divided into sections corresponding to the Special Symposia topics. Please find your section in the Book of Abstracts or this Program brochure and look for your name and title on the poster boards. Mounting tape will be provided.
- Please stand by your poster during sessions, Tuesday 31 Aug 17:40–19:00 and Thursday 2 Sep 17:40–19:00.
- Please leave your posters mounted until Friday so that they can be seen throughout the conference.

FULL CONFERENCE PROGRAM

SUNDAY 29 AUG : Karst Research Institute

17:00 and ongoing **Registration**

19:00 **Welcome reception sponsored by the Municipality of Postojna**

Brief welcomes will be given by the Mayor of Postojna, Mr. Jernej Verbič, and the head of the Karst Research Institute at ZRC SAZU, Dr. Tadej Slabe - Opening of the exhibition "The Proteus among us", prepared by Notranjska museum Postojna.

MONDAY 30 AUG : Jamski dvorec – Luka Čeč Hall

8:00 and ongoing **Registration, poster hanging**

9:00 10:00 **Opening ceremony**

Mr. Matjaž Berčon

Director of Turizem Kras, Conference Host

Prof. Giuseppe Messana

President of the International Society of Subterranean Biology

Dr. Roko Žarnić, Minister

Slovenian Ministry of the Environment and Spatial Planning

10:00 10:50 **Opening lecture**

Sket, B.

Subterranean fauna of the wider Dinaric area – from first discoveries to a global hotspot and its up-to-date biological evaluation

10:50 11:20 **Coffee break**

Introductory lectures to special symposium: Superficial Subterranean Habitats

Chair: P. Marmonier

11:20 12:00 Culver, D. C.*, Pipan, T.

Shallow subterranean habitats – gateway to the subterranean realm

12:00 12:20 Hahn, H. J.*, Bork, J., Schmidt, S. I.

What is groundwater? A new approach, and what this means to fauna

12:20 13:00 Humphreys, W.*, Guzik, M., Bradford, T., Cooper, S., Leijs, R., Watts, C., Austin, A.

Groundwater calcretes: sheets of subterranean habitat scattered on an Archaean landscape

13:00 14:00 **Lunch**

Introductory lectures to special symposia: Microbiology and Geomicrobiology;

Adaptation, Development, Physiology; Annelida; Countdown 2010 and Conservation

Chair: O. Moldovan

14:00 14:20 P Paoletti, M.G., Beggio, M., Dreon, A. L., Pamio, A., Gomiero, T., Brilli, M., Toniello, V., Concina, G., Dorigo, L., Concheri, G., Squartini, A., Summers Engel, A.

A newly discovered cave foodweb: the *Cansiliella* story

14:20 15:00 Jeffery, W. R.

Pleiotropic tradeoffs between constructive and regressive traits during troglomorphic evolution

15:00 15:20 Martínez-Ansemil, E. *, Sambugar, B.

Annelida, an often neglected component of groundwater ecosystems

MONDAY 30 AUG : Jamski dvorec, continued

15:20	15:40	Eberhard, S.	Impacts of climate change on stygofauna in southwest Western Australia
15:40	16:10	Coffee break	
Introductory lectures to special symposia: Patterns and Processes in Subterranean Biodiversity; Subterranean Beetles - Chair: S. Gottstein			
16:10	16:30	Porter, M. L.*, Culver, D. C.	Tethyan distribution of stygobionts: fact or fiction
16:30	16:50	Zagmajster, M.*, Sket, B.	Biodiversity pattern and distribution ranges of terrestrial troglobionts in the northwestern Balkans
16:50	17:10	Schuldt, A., Drees, C., Drescher, N., Schäfer, K., Assmann, T.*	What determines subterranean ground beetle diversity in the West Palaearctic? A macroecological approach using country-based distribution data (Coleoptera: Carabidae)
17:10	17:50	Casale, A.	From <i>Anophthalmus schmidti</i> to molecular phylogenies: past and present in the knowledge of subterranean carabid beetles (Coleoptera: Carabidae)
17:50	19:00	Break, poster hanging	ISSB Council Meeting
19:00	20:00	Visit to Postojna Cave	

TUESDAY 31 AUG : Jamski dvorec

8:00 and ongoing **Registration, poster hanging**

NANOS ROOM

Superficial Subterranean Habitats

Chair: D. C. Culver

8:30	8:50	Pipan, T.*, Culver, D. C., Simon, K. S.	Organic carbon in aquatic shallow subterranean habitats
8:50	9:10	Marmonier, P.*, Navel, S., Piscart, C., Chauvet, E.	Particulate organic matter breakdown in shallow interstitial habitat of a rural stream
9:10	9:30	Gottstein, S.*, Žgane, K., Cetin Krnjević, V., Popijač, A.	Life history traits of the epigean populations of <i>Niphargus dalmatinus</i> (Crustacea: Amphipoda) along the Cetina River, Croatia
9:30	9:50	Fong, D. W.*, Kavanaugh, K. E.	Population dynamics of the stygobiotic amphipod crustacean <i>Stygobromus tenuis potomacus</i> and isopod crustacean <i>Caecidotea kenki</i> at a single hypotelminorheic habitat over a two-year span
9:50	10:10	Meleg, I. N.*, Fiers, F., Kelemen, B., Popescu, O., Moldovan, O. T.	Heterogeneous copepod distribution in different groundwater habitats from Northwestern Romania

PIVKA ROOM

Phylogeography and Phylogeny

Chair: C. J. Douady

Kornobis, E.*, Pálsson, S.	Phylogeny of Crangonyctoidea: taxonomic status and origin of groundwater amphipods, endemic to Iceland, based on two nuclear genes
Leijs, R.	Evolution of chiltoniid amphipods from subterranean and surface habitats in Australia
Abrams, K.*, Guzik, M., Cooper, S., King, R., Austin, A.	Systematics and phylogeography of Australian Parabathynellidae (Crustacea: Bathynellacea)
Baratti, M.*, Messina, G., Filippelli, M., Sket, B.	New biogeographical and phylogenetic data about the genus <i>Sphaeromides</i> and its relatives (Crustacea: Isopoda: Cirolanidae)
Verovnik, R.*, Stoch, F., Sket, B.	Phylogeny of the Western taxa of the genus <i>Monolistra</i> (Crustacea: Isopoda: Sphaeromatidae)

TUESDAY 31 AUG : Jamski dvorec, continued

10:10	10:30	Papi, F.*, Pipan, T., Culver, D. C.	Ecological studies of an epikarst community in Alpine cave Snežna jama na planini Arto: preliminary results	Lukić-Bilela, L.*, Pleše, B., Bruvo-Madžarić, B., Imešek, M., Bilandžija, H., Četković, H.	The mitochondrial genome analysis of the unique cave dwelling sponge <i>Eunapius subterraneus</i> Sket & Velikonja, 1984 (Porifera: Spongillidae)
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10:30 11:00 Coffee break

			Superficial Subterranean Habitats, continued	Phylogeography and Phylogeny, continued - Chair: M. Porter	
11:00	11:20	Juberthie, C.	Mesovoid shallow substratum (MSS)	Allegrucci, G.*, Trucchi, E., Sbordoni, V.	Patterns of speciation in <i>Dolichopoda</i> cave crickets (Orthoptera, Rhabdiphoridae)
11:20	11:40	Novak, T.*, Perc, M., Janžekovič, F.	Candidates for superficial subterranean habitats and epikarst among terrestrial cave inhabiting species	Mugue, N. S.	Caucasus and vicinity: comparative phylogeography of Ponto-Caspian and subterranean crustaceans
11:40	12:00	Oromí, P.*, López, H., Manhert, V.	Diversity and allopatric distribution in the Canarian MSS: a case study in an old island	Jugovic, J.*, Prevorčnik, S., Blejec, A., Sket, B.	Linking molecular phylogeny to morphological evolution in <i>Troglocaris</i> (Crustacea: Decapoda: Atyidae)
12:00	12:20	Růžička, V.	Central European spiders adapted to life in subterranean habitats	Zakšek, V.*, Sket, B., Trontelj, P.	Phylogeography of the cave shrimp <i>Troglocaris</i> s. str.: a basis for a comparative phylogeography of Dinaric subterranean fauna

			Patterns and Processes in Subterranean Biodiversity - Chair: M. Zagnajster	Phylogeography and Phylogeny, continued	
12:20	12:40	Eberhard, S.*, Stevens, N., Perina, G., Bell, P.	Troglofauna in the Pilbara region, Western Australia – Patterns in diversity and distribution, and sampling considerations for conservation assessment	Palandačić, A.*, Zupančič, P., Matschiner, M., Snoj, A.	Genetic evidence of subterranean migration of imotska gaovica <i>Delminichthys adspersus</i> (Pisces: Cyprinidae)
12:40	13:00	Halse, S.	Distribution patterns of different groups of troglofauna in the Pilbara region, Western Australia: are arachnids the most restricted troglofauna?	Strecker, U.*, Wilkins, H.	Problems of taxonomy in Mexican <i>Astyanax</i>

13:00 14:00 Lunch

			Patterns and Processes in Subterranean Biodiversity, continued	Systematics and Faunistics Chair: R. Verovnik	
14:00	14:20	Berkhoff, S.E.*, Matzke, D., Fuchs, A., Bork, J., Hahn, H. J.	Recording the stygofauna of the federal state of Sachsen-Anhalt, Germany	Sidorov, D. A.	Pseudocrangonyctidae (Crustacea: Amphipoda) and its forming pathways
14:20	14:40	Moldovan, O. T.*, Meleg, I. N., Perşoiu, A.	Habitat fragmentation and its effects on groundwater populations	Semenchenko, K. A.	Water mites (Hydrachnidia) from interstitial habitats of the Russian Far East and their relationship with faunas of adjacent lands

TUESDAY 31 AUG : Jamski dvorec, continued

14:40	15:00	Bork J.* , Fuchs A., Barufke K. P., Hahn H. J.	Nine years of long-term stygo fauna monitoring in Southwest Germany	Eberhard, S., Moulds, T.*	Review of the subterranean biodiversity of the Nullarbor plain, Southern Australia
15:00	15:20	Stein, H.* , Berkhoff, S.E., Matzke, D., Hahn, H. J.	Spatial distribution patterns of faunal groundwater communities across Germany	Deharveng, L.* , Tian, M., Li, Y., Bedos, A.	Invertebrate biodiversity of the Guangxi caves (Southern China)
15:20	15:40	Stoch, F.* , Gasparo, F.	Regional species richness and diversity patterns of obligate cave-dwelling fauna in the Classic Karst in Italy	Drescher, N., Loos, J., Levanony, T., Dayan, T., Schuldt, A., Schäfer, K., Assmann, T.*	Unexpected rich terrestrial subterranean fauna in Israel: first results from the inventory of 13 caves
15:40	16:00	Lopes Ferreira, R.	Hidden biodiversity: recent advances and perspectives in Brazilian subterranean biology	Subhash Babu, K. K , Bijoy Nandan, S.*	The hypogean fauna of selected ecosystems of Kerala, India with two new records

16:00 16:30 Coffee break

		Patterns and Processes in Subterranean Biodiversity, continued		Systematics and Faunistics, continued	
16:30	16:50	Bedek, J.	Data analysis of spatial distribution of cave terrestrial isopods (Isopoda: Oniscidea) in Croatia	Kováč, L.* , Luptáčík, P., Papáč, V., Mock, A., Mourek, J.	Contribution to morphology of palpigrade <i>Eukoenenia spelaea</i> (Peyerimhoff, 1902) and its distribution in the Western Carpathians
16:50	17:10	Maurice, L.* , Robertson, A., Bloomfield, J., Allen, D.	Spatial variations in stygo biont distributions in the English Chalk	Mock, A.	Terrestrial isopods and millipedes in Slovak caves: results of long-term exploration
17:10	17:30	Short documentary	Mlinar, C.	The aquatic life of the Postojna-Planina Cave System	
17:40	19:00	Poster Session I			
19:10	20:00	Visit to Vivarium Proteus for first group			

WEDNESDAY 1 SEP : MID-CONFERENCE EXCURSION

For the excursion description see page 17.

THURSDAY 2 SEP : Jamski dvorec

8:00 and ongoing **Registration**

NANOS ROOM

Countdown 2010 and Conservation of Subterranean Life - Chair: G. Beltram

8:30	8:50	Souza Silva, M.* , Parentoni Martins, R., Lopes Ferreira, R.	Conservation of cave invertebrates and study of impacts on caves located in the Brazilian Atlantic rain forest
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PIVKA ROOM

Adaptation, Development, Physiology Chair: W. R. Jeffery

Šustr, V.* , Nováková, A., Lukešová, A., Vošta, O.	Feeding biology of the cave isopod <i>Mesoniscus graniger</i> (food preference and digestive enzymes)
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THURSDAY 2 SEP : Jamski dvorec, continued

8:50	9:10	Muriel-Cunha, J.*, Cardoso, N. A., Martinelli Filho, J. E., Gutembergue, G., Albino, U.	Biospeleological research in the Amazon: the case of Planaltina cave in the ecoregion Xingu-Tapajós, Brazil	Vittori, M.*, Žnidaršič, N., Štrus, J.	The gland-piliferous organs of <i>Titanethes albus</i> (Crustacea: Isopoda)
9:10	9:30	Dravec, L., Kostelić, B.*, Mandić, A.	Protection of speleological objects in the region of Istria through the European Union projects	Lipovšek, S.* , Novak, T., Janžekovič, F., Pabst, M. A.	Role of the fat body in the cave crickets <i>Troglophilus cavicola</i> and <i>T. neglectus</i> (Rhaphidophoridae, Saltatoria) during overwintering
9:30	9:50	Ozimec, R.*, Polak, S., Bedek, J., Zakšek, V.	Biospeleological component of the project KUP (Karst Underground Protection) in Istra Peninsula	Antolinc, E.*, Janžekovič, F., Perc, M., Novak, T.	Cold-hardiness in Central European troglaphiles and troglonexes
9:50	10:10	Ipsen, A.	How efficient are the non invasive protection measures in the Segeberg Cave in Northern Germany for the population of bats and subterranean beetles	Trajano, E.*, Herrero, J.C.H., Menna-Barreto, L.	Chronobiological studies on Brazilian subterranean fishes: a summary and new data on locomotor activity rhythms under light-dark cycles
10:10	10:30	Susac, R. A. J.*, Anderson, J., Moulds, T. A.	Comparisons of subterranean biodiversity from the West Kimberley Karst, Australia	Aljančič, G.	Fifty years of Tular Cave Laboratory

10:30 11:00 Coffee break

Coffee break

Countdown 2010 and Conservation of Subterranean Life, continued

Chair: S. Eberhard

11:00	11:20	Dvorščak, K.	History of the presentation of the proteus (<i>Proteus anguinus</i>) in Postojna Cave
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Adaptation, Development, Physiology, continued

Karaman, I.*, Ozimec, R.	New long-legged cave-dwelling representatives of the Balkan genus <i>Cyphophthalmus</i> (Opiliones, Cyphophthalmi, Sironidae) and the question of functional significance of troglobite appendage elongation
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11:20	11:40	Goater, S.*, Gardner, A., Knott, B.	Are stygofauna really protected in Western Australia?
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Zacharda, M.	Troglophormisms in Rhagidiidae (Acari: Prostigmata): are they all a morphological clock of adaptation ?
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Countdown 2010 and Conservation of Subterranean Life, continued

11:40	12:00	Beltram, G.* , Sket, B.	Subterranean habitats as wetlands of international importance
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Subterranean Aquatic Annelida

Chair: E. Martínez-Ansemil

Martínez García, A.*, Kvindebjerg, K., Worsaae, K.	Annelid diversity in anchialine systems: unique adaptations and functional morphology of <i>Protodrilus</i> n. sp. to the cave environment of La Corona lava tube (Canary Islands, Lanzarote)
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THURSDAY 2 SEP : Jamski dvorec, continued

12:00	12:20	Reboleira, A. S. P. S.*, Gonçalves, F., Oromí, P.	Subterranean biology of mainland Portugal: historical review and new insights	Dumnicka, E.	Stygobiotic oligochaetes in Poland with remarks on their occurrence and distribution in Central Europe
12:20	12:40	Semikolennykh, A.*, Rakhleeva, A., Poputnikova, T.	An environmental impact assessment of spent calcium carbide disposal in caves and mines	Achurra, A.*, des Châtelliers, M. C., Rodriguez, P.	Molecular and morphological analyses reveal the presence of two species in the stygobiont oligochaete <i>Troglo-drilus galarzai</i>
12:40	13:00	Fajdiga, B., Stupar, M.*	Subterranean protection starts on the surface	Giani, N., Sambugar, B.*, Martínez- Ansemil, E., Martin, P., Schmelz, R.	Groundwater oligochaetes (Annelida, Clitellata) of Slovenia
13:00	14:00	Lunch		Lunch	
		Microbiology and Geomicrobiology <i>Chair: R. Fowler</i>		Evolution and Systematics of Subterranean Beetles - Chair: A. Casale	
14:00	14:20	Silva Taylor, E. L.*, Lopes Ferreira, R., Aparecida de Resende Stoianoff, M.	Microbiological study for a management plan in a touristic cave in Brazil	Giachino, P. M.	From the cavernicolous to the subterranean concept: past and present in Leptodirinae (Coleoptera, Cholevidae)
14:20	14:40	Nováková, A.	Cave microscopic fungi as food source for caves inhabiting springtails and some microfungus records	Vrezec, A.*, Kapla, A.	The influence of aboveground invasions on the diversity and distribution patterns of subterranean carabids (Carabidae)
14:40	15:00	Tkavc, R.*, Sonjak, S., Gunde- Cimerman, N.	Entomopathogenic fungi associated with two troglophilic moths <i>Scoliopteryx libatrix</i> L. and <i>Triphosa dubitata</i> L.	Fresneda, J., Grebennikov, V. V., Ribera, I.*	The geographic and phylogenetic limits of Leptodirini
15:00	15:20	Hermosin, B., Nováková, A., Jurado, V., Laiz, L., Porca, E.*, Rogerio, M. A., Sanchez-Moral, S., Saiz-Jimenez, C.	Microbial Observatory of Spanish Caves: assessing the origin of fungal outbreaks	Polak, S.*, Trontelj, P.	Suprageneric systematics of leptodirine beetles (Leiodidae, Cholevidae): molecular versus morphological characters
15:20	15:40	Brannen, K. M.*, Summers Engel, A., Birdwell, J. E.	Creating humic matter indices for the interpretation of ecosystem energetics	Friedrich, M.*, Rai, P., Barret, R., Daines, B., Chen, R.	The blind cave beetle that isn't: histological, behavioral and molecular evidence of functional photoreceptors in <i>Ptomaphagus hirtus</i>
15:40	16:00	Mulec, J.*, Walochnik, J.	Airborne microorganisms and relation to atmospheric parameters in big cave systems (Postojnska jama, Slovenia)	Hauser, B.	Leo Weirather (1887-1965) revisited
16:00	16:30	Coffee break		Coffee break	

THURSDAY 2 SEP : Jamski dvorec, continued

		Microbiology and Geomicrobiology, continued	Evolution and Systematics of Subterranean Beetles, continued
16:30	16:50	Pašič, L.*, Kovče, B., Sket, B., Herzog-Velikonja, B., Porca, E., Jurado, V., Saiz-Jimenez, C.	Diversity of microbial communities colonizing the walls of a karstic cave in Slovenia
16:50	17:10	Zakotnik, T., Mulec, J., Turk, V., Avguštin, G., Stres, B.*	Composition and activity of bacterial microbial communities in the Postojna cave sediments: are the microbes in 700 000 years old sediments still active?
17:10	17:30	Short documentary	Lukić, M.*, Bedek, J. Behavior of Cave Fauna
17:40	19:00	Poster Session II	
19:10	20:00	Visit to Vivarium Proteus for second group	

FRIDAY 3 SEP : Jamski dvorec – Luka Čeč Hall

8:00 and ongoing **Registration**

8:40 9:00 **In Memoriam**

Marmonier, P.
Latella, L.

Janine Gibert (1945-2009)
Sandro Ruffo (1915-2010)

New Models, Methods, and Concepts for Subterranean Biology - *Chair: R. Leijs*

9:00	9:40	Douady, C. J.*, Malard, F., Konecny, L., Morvan, C., Colson-Proch, C., Calvignac, S.	A new phylogenetic framework to decipher evolutionary processes involved in groundwater
9:40	10:00	Morvan, C.*, Konecny, L., Malard, F., Douady, C. J.	Is stygobiont diversification a consequence of extrinsic factors?
10:00	10:20	Malard, F.*, Konecny, L., Magniez, G., Douady, C. J.	The large distribution ranges of northern stygobiotic species of <i>Proasellus</i> (Isopoda): a test of cryptic diversity
10:20	10:40	Avguštin, G.*, Gramc, S., Bizjak Mali, L., Bulog, B., Ambrožič Avguštin, J.	The structure and diversity of the microbial community inhabiting the hind gut of the olm (<i>Proteus anguinus</i>)

10:40 11:10 **Coffee break**

New Models, Methods, and Concepts for Subterranean Biology, continued

Chair: E. Aden

11:10	11:30	Prevorčnik, S.*, Trontelj, P., Sket, B.	Rapid re-invasion and evolution following the mysterious disappearance of Racovitza's <i>Asellus aquaticus cavernicolus</i> (Crustacea: Isopoda: Asellidae)
11:30	11:50	Konec, M.*, Trontelj, P.	Microsatellites as new tools to study the evolution of subterranean crustaceans

FRIDAY 3 SEP : Jamski dvorec, continued

11:50	12:10	Fowler, R.	Quantitative Real-Time PCR as a tool for the quantification and characterization of microorganisms in caves and karst aquifers: phytoplankton, lampenflora, bacterial communities, and fecal source tracking
12:10	12:30	Moškrič, A. *, Trontelj, P., Fišer, C.	A bioinformatic quest for phylogenetic resolution: adding new genes to the <i>Niphargus</i> supermatrix
12:30	12:50	Trajano, E.	Source <i>versus</i> sink populations concept applied to the Schiner-Racovitza classification of subterranean organisms

13:00 14:00 Lunch

New Models, Methods, and Concepts for Subterranean Biology, continued

Chair: S. Halse

14:00	14:20	Slay, M. E. *, Fong, D. W.	Preliminary estimates of species detection probabilities for North American troglobionts
14:20	14:40	Turjak, M. *, Trontelj, P.	A new tree-based method for the quantitative analysis of phylogenetic character patterns: a case study with <i>Niphargus</i> (Amphipoda; Crustacea)
14:40	15:00	Flot, J. F. *, Bauermeister, J., Dattagupta, S.	<i>Niphargus</i> amphipods and their <i>Thiothrix</i> ectosymbionts in Frasassi (central Italy): a tale of multiple invasions and host specificity
15:00	15:20	Fišer, C. *, Trontelj, P.	Adaptive morphology of subterranean amphipod communities
15:20	15:40	Lopes Ferreira, R.	Translocation of cave fauna in Brazilian iron ore cave

15:40 16:00 Coffee break

16:00 16:30 Conference close

Presentation of next conference venue

16:30 19:00 General Assembly of the International Society for Subterranean Biology; Meeting of the new Council

20:00 Conference dinner

LIST OF POSTER PRESENTATIONS

Adaptation, Development, Physiology

- Aden, E. Eye development in the cave fish *Garra barreimiae*
- Aljančič, G., Prelovšek, M.* Does *Proteus* detect and react to a sudden rise of water conductivity which indicates incoming flood?
- Bernabò, P., Jousson, O., Lencioni, V., Latella, L. Heat Shock Response in the leptodirins *Neobathyscia mancinii* and *Neobathyscia pasai*
- Bizjak Mali, L.*, Talaber, I., Žibert, U., Bulog, B. Oogenesis in *Proteus*: Stages of oocyte development
- Jugovic, J.*, Prevorčnik, S., Aljančič, G., Sket, B. The shrimp rostrum between phylogeny and adaptation
- Konec, M.*, Bulog, B. Three-dimensional reconstruction of the inner ear of *Proteus anguinus* (Amphibia: Urodela)
- Lukić, M.*, Houssin, C., Deharveng, L. Extreme troglomorphy in a new species of cave springtail, *Tritomurus* sp. nov., from Croatia (Collembola: Tomoceridae)
- Luptáček, P.*, Šustr, V. What we know about *Pantelozetes cavaticus* (Acari, Oribatida), notes on distribution, ecology, food preference and morphology
- Simon, L., Mermillod-Blondin, F., Malard, F., Lécuyer, C., Fourel, F., Douady, C. J.* Trophic niche of two subterranean isopod species along a parapatric boundary in pre-Alps and Jura Mountains (France): a preliminary field study using stable isotopes
- Trajano, E., Pavani, M. P. Related and yet different: behavioral differences between troglobitic heptapterid catfishes, *Pimelodella kronei* and *Rhamdia* spp.

Countdown 2010 and Conservation of Subterranean Life

- Crnčević, M., Ivanišin Kardum, K., Sudarević, N.* Conservation education of cave and subterranean biodiversity: Dubrovnik underground tales
- Manconi, R., Cadeddu, B.*, Stocchino, G.A., Pansini, M., Pronzato, R., Ledda, F.D. Porifera checklist and database of Mediterranean marine caves
- Manconi, R., Ledda, F. D. *, Stocchino, G. A., Casale, A., Grafitti, G. Working for the candidate Orosei Marine Protected Area (Central-East Sardinia): on a benthic community from a subterranean estuary in a karstic coastal cave
- Năpăruș, M., Aljančič, G.*, Oštir, K. Design of a GIS database to monitor possible threats to the habitat of *Proteus anguinus* (Amphibia: Proteidae). A case study of a highly vulnerable population of *P. a. parkelj* in Bela krajina, Slovenia
- Susac, R. A. J.*, Zakrzewska, B. Management of a declining watertable at Yanchep National Park, Western Australia; for the benefit of subterranean biology
- Šturm, S., Sedmak, A.*, Zorman, T., Peric, B. Technical illustrations and application: Škocjan Caves, Velika Dolina cross section
- Torres-Talamante, O.* Food webs in Mexican Caribbean Caves

Evolution and Systematics of Subterranean Beetles

- Bognolo, M.* The genus *Aphaobius* Abeille de Perrin, 1878 (Coleoptera, Cholevidae, Leptodirinae)
- Jalžić, B., Bregović, P.* The edge of the range of genus *Anthroberpon* in Croatia
- Njunjić, I.*, Pavićević, D. Diversity of troglobitic beetles (Insecta, Coleoptera) of Krivošije area (Orjen Mt, Montenegro) in the scope of the recent biospeleological investigations
- Ortuño, V. M., Gilgado, J. D.*, Sendra, A. Update of the knowledge of the Ibero-Balearic hypogean Carabidae (Insecta: Coleoptera): faunistics, biology and distribution
- Pavićević, D.*, Ozimec, R. First finding of the troglobitic genus *Seracamaurops* (Coleoptera, Staphylinidae, Pselaphinae) for Croatia
- Rizzo, V.*, Comas, J., Fadrique, F., Fresneda, J., Ribera, I. Evolution and phylogeny of the subterranean genus *Troglocharinus* (Coleoptera, Leioididae, Leptodirini)

Microbiology and Geomicrobiology

- Borda, D.* , Mulec, J., Nastase-Bucur, R. Bat guano – a potential biohazard agent of caves in the temperate zone?
- Buffoni Roque da Silva, L.* , da Costa Maia, N., Silva Taylor, E. L., Batista, L. R., Lopes Ferreira, R., Gomes Cardoso, P. Evaluation and morphological identification of tannase-producing cave fungi
- Buzzacott, P. L.* , Buckley, D. Waterworth, P. Chemoautotrophic microbial mantle prevalence in Murra El Elevyn: catastrophic decline or seasonal fluctuation?
- Křišťůfek, V., Chroňáková, A., Mulec, J.* The heavy metal content in bat guano heaps in karst caves
- Nirlane da Costa, P., Gonçalves de Melo, A.* , Batista, L. R., Silva Taylor, E. L., Lopes Ferreira, R., Gomes Cardoso, P. Identification of tannase producing fungi species in Brazilian caves
- Nováková, A., Brad, T., Moldovan, O. T., Hillebrand, A. Microscopic fungi isolated from several caves in Romania
- Porca, E.* , Jurado, V., Nováková, A., Saiz-Jimenez, C. Origin and development of a fungal outbreak in Castañar de Ibor Cave, Spain
- Silva Taylor, E. L.* , da Silva, D. M., Ferreira Terra, M., Batista, L. R., Lopes Ferreira, R. Microbiologic study in a Brazilian cave: biodiversity, biotechnological potential and toxin production

Patterns and Processes in Subterranean Biodiversity

- Hazelton, E. R.* , Hobbs III, H. H. Effects of glaciation on the distribution of troglomorphic biota in Ohio, USA
- Latella, L.* , Verdari, N., Gobbi, M. Distribution and frequency of cave-dwelling terrestrial arthropods in two spatially closed karst areas of the eastern Italian Prealps
- Lips, J., Bedos, A., Kaufmann, B., Rahmadi C., Deharveng, L.* Arthropods of guano in Santo caves (Vanuatu)
- Lopes Ferreira, R.* , Souza Silva, M. The cave lithology determining the structure of the cave invertebrate communities in the Brazilian Atlantic Rain Forest
- Mihevč, A., Paul-Istrate, V., Moldovan, O. T.* , Constantin, S. First results on subfossils in cave sediments from Slovenia and Romania
- Rampini, M., Di Russo, C., Cobolli, M. The cave crickets of the Eastern Mediterranean area: a contribution to the study of Balkan and Anatolian Rhaphidophoridae diversity
- Souza Silva, M.* , Parentoni Martins, R., Lopes Ferreira, R. Trophic dynamics of the coarse particulate organic matter (CPOM) in a tropical limestone cave
- Zagmajster, M.* , Kadiš, A., Golob, K., Fišer, C. Range sizes in subterranean amphipods of the genus *Niphargus*

Phylogeography and Phylogeny

- Bilandžija, H.* , Podnar, M., Jalžić, B., Patarčić, I., Tvrčković, N., Cetković, H. Phylogeny and phylogeography of the cave bivalve *Congeria kusceri*, with an outline for its endangerment in Croatia
- Fišer, Ž.* , Moškrič, A., Fišer, C. A molecular test for *Niphargus krameri* (Crustacea: Amphipoda) intraspecific diversity
- Kornobis, E.* , Pálsson, S., Kristjánsson, B. K., Svavarsson, J. Molecular evidence of the survival of subterranean amphipods (Arthropoda) during Ice Ages underneath glaciers in Iceland
- Schepetov, D. M.* , Mugue, N. S., Ljovushkin, S. I. On molecular phylogeny of *Niphargus* from the West Transcaucasus
- von Rintelen, K.* , Page, T. J., Cai, Y., Roe, K., Kuhajda, B. R., Iliffe, T., Hughes, J., von Rintelen, T. Living in the dark: phylogeny of atyid freshwater shrimps reveals multiple cave invasions
- von Rintelen, K., Page, T. J., Cai, Y., Wowor, D., Wessel, A., Stelbrink, B., Iliffe, T., von Rintelen, T.* Colonization and subterranean speciation in atyid freshwater shrimps from Maros karst, Sulawesi

Subterranean Aquatic Annelida

- Cukrov, M. *, Manconi, R., Cukrov, N., Jalžić, B., Despalatović, M. Biodiversity in anchialine caves: first record of the tubeworm *Ficopomatus enigmaticus* (Annelida, Polychaeta)
- Zakšek, V. *, Sket, B., Trontelj, P. Phylogeography of the unique cave tube worm *Marifugia cavatica* (Polychaeta: Serpulidae)

Superficial Subterranean Habitats

- Porter, M. L. *, Culver, D. C., Pipan, T. Molecular diversity of epikarst copepods from John Friends Cave, Maryland, USA
- Rendoš, M. *, Mock, A., Luptáčik, P. First observation of terrestrial arthropods in superficial subterranean habitats in Slovakia: vertical distribution, seasonal dynamics and temperature
- Schmidt, S. I. *, Kreft, J. U., Avramov, M., Griebler, C., Hahn, H. J., Humphreys, W. F. Is there actually enough (import of) carbon in(to) the groundwater system to support the microbial and faunal numbers that we see?

Systematics and Faunistics

- Esmaili, S. R. *, Sari, A. Niphargids of Iran with focus on the Zagros Mountains
- Lana, E. *, Isaia, M. Subterranean arachnids of the Western Italian Alps (Arachnida: Araneae, Opiliones, Palpigradi, Pseudoscorpiones)
- Geoffroy, J.-J. *, Iorio, E. The French soil- and cave-dwelling centipedes (Chilopoda): updated checklist and distribution in mainland France, Corsica and Monaco, with emphasis on subterranean fauna, conservation purposes and regional biodiversity
- Komerički, A. *, Ozimec, R. Faunistic and biogeographic characteristics of the centipedes (Chilopoda) in Croatia with special review on the genus *Eupolybothrus* (Lithobiidae)
- Manconi, R. *, Ledda, F. D., Stocchino, G. A., Grafitti, G. Biogeographic patterns of lithistids (Demospongiae) from Mediterranean marine caves
- Manconi, R., Ledda, F. D., Stocchino, G. A., Grafitti, G. * Is the geographic range of the palaeoendemic sponge *Petrobiona massiliana* (Porifera: Calcarea) restricted to the central-northwestern Mediterranean Sea?
- Mori, N. *, Meisch, C., Brancelj, A. Biodiversity of ostracods (Ostracoda, Crustacea) in groundwater habitats of Slovenia
- Oarga, A. *, Schiller, E., Perşoiu, A., Šebela, S., Mulec, J. Contribution to the ecology of Copepoda in sulphidic karst springs (Žveplenica – Dolenja Trebuša, Slovenia)
- Ozimec, R. *, Karaman, I. M., Tulić, U., Pavičević, M., Lukić-Bilela, L. Biospeleological research of Pećina na Vrelu Mokranjske Miljacke Cave in Bosnia and Herzegovina
- Papáč, V. * Collembolan communities (Hexapoda, Collembola) in karst and basalt caves of central Slovakia (Western Carpathians)
- Perreau, M. *, Faille, A. Advances in the knowledge of subterranean Staphylinidae of Morocco: the genus *Apteranillus* Fairmaire (Staphylinidae, Aleocharinae, Lomechusini)
- Sendra, A., Moldovan, O. T., Ballesteros, B. J., Domínguez-Sánchez, J. A., Teruel, S., Urios, G., Jaume, D., Reboleira, A. S. P. S. *, Gilgado, J. D. Discovery of stygobiotic crustaceans in boreholes at the Deep Jurassic aquifer of El Maestrazgo (S.E. Spain)
- Sidorov, D. A. *, Pankov, N., Krashennikov, A. B. A *Bactrurus*-like subterranean amphipod (Crangonyctidae) from the Ural Mountain karst region
- Stocchino, G. A. *, Sluys, R., Manconi, R., Casale, A., Marcia, P., Grafitti, G., Cadeddu, B., Corso, G., Pala, M. Triclad from Italian groundwaters (Platyhelminthes, Tricladida)
- Vahid, A. *, Esmaili, S. R., Ali, F. Diversity and distribution of subterranean species in karst areas of Iran
- Višňovská, Z. Species diversity and distribution of aquatic Crustacea in caves of Slovakia (Central Europe, Western Carpathians)
- Weigand, A. M., Jochum, A. *, Slapnik, R., Klussmann-Kolb, A. A 21st Century identity for an old snail condemned to darkness – Barcoding *Zospeum* (Pulmonata, Ellobioidea, Carychiidae)
- Wessel, A. *, Mühlethaler, R., von Rintelen, K., von Rintelen, T., Stelbrink, B., Wachmann, E., Hoch, H. First record of a root community in Southeast Asia: cave-dwelling planthoppers from Maros karst, Sulawesi (Hemiptera: Fulgoromorpha: Cixiidae: Bennini)