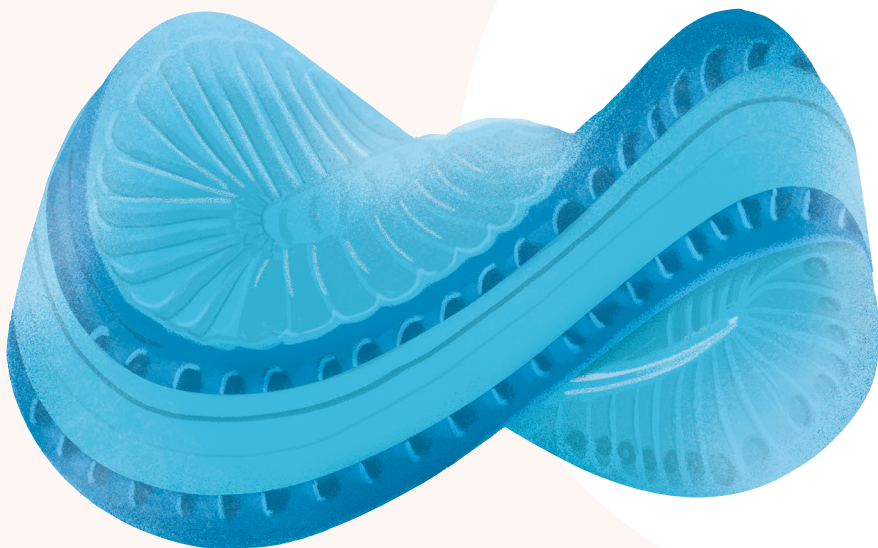


15th

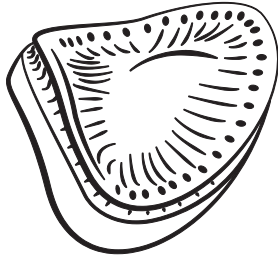
EUROPEAN DIATOM MEETING

Ohrid, North Macedonia



BOOK OF ABSTRACTS

Ohrid | May 7th—9th | 2024



15th
EUROPEAN
DIATOM MEETING
Ohrid, North Macedonia
7th – 9th
May, 2024

BOOK OF ABSTRACTS

Organizing committee

Dr. Zlatko Levkov,

Faculty of Natural Sciences and Mathematics in Skopje

Dr. Svetislav Krstic,

Faculty of Natural Sciences and Mathematics in Skopje

Dr. Marija Gligora Udovič,

Faculty of Science, University of Zagreb

Msc. Danijela Mitic-Kopanja,

Faculty of Natural Sciences and Mathematics in Skopje

Msc. Dušica Zaova,

Faculty of Natural Sciences and Mathematics in Skopje

Msc. Boris Aleksovski,

Faculty of Natural Sciences and Mathematics in Skopje

Ana Boshaleska,

Faculty of Natural Sciences and Mathematics in Skopje

Neda Raposka,

Faculty of Natural Sciences and Mathematics in Skopje

THIS PUBLICATION SHOULD BE CITED AS FOLLOWS:

Zlatko Levkov, Danijela Mitic Kopanja & Dušica Zaova (Eds) 2024. Book of Abstracts, 15th European Diatom Meeting, Ohrid, North Macedonia, 07–10 May 2024. 217 pp.

Scientific committee

Dr. Bánk Beszteri,

Fakultät für Biologie, University of Duisburg-Essen, Essen, Germany

Dr. Saul Blanco,

Department of Biodiversity and Environmental Management,
Universidad de León, León, Spain

Dr. Krisztina Buczkó,

Centre for Ecological Research, Institute of Aquatic Ecology (IAE),
Budapest, Hungary

Dr. Marco Cantonati,

Department of Biological, Geological, and Environmental Sciences,
University of Bologna, Italy

Dr. Ingrid Jüttner,

Department of Natural Sciences, National Museum of Wales, Cardiff,
United Kingdom

Dr. Jelena Krizmanic,

Faculty of Biology, Institute of Botany and Botanical Garden, 'Jevremovac',
University of Belgrade, Belgrade, Serbia

Dr. Wolf-Henning Kusber,

Botanischer Garten und Botanisches Museum Berlin, Germany

Dr. Nadja Ognjanova-Rumenova,

Department of Paleontology, Stratigraphy and Sedimentology,
Geological Institute, Bulgarian Academy of Sciences

Dr. Frederic Rimet,

French National Institute for Agriculture, Food, and Environment INRAE
Thonon-les-Bains, France

Dr. Koen Sabbe,

Department of Biology, University of Ghent, Ghent, Belgium

Dr. Rosa Trobajo,

Institute of Agriculture and Food Research and Technology (IRTA):
Sant Carles de la Rapita, Catalonia, Spain

Dr. Bart Van de Vijver,

Research Department, Meise Botanic Garden, Meise, Belgium

Dr. David M. Williams,

Department of Life Sciences, The Natural History Museum, London
United Kingdom.

Dr. Agata Wojtal,

Institute of Nature Conservation, Polish Academy of Sciences, Kraków, Poland

DIATOM DIVERSITY OF FIVE THERMAL SPRINGS IN SERBIA

Ana Milićević^{1*}, Slađana Popović¹, Vukašin Bjelica¹, Božica Vasiljević², Jelena Krizmanić¹ & Olga Jakovljević¹

¹ *University of Belgrade, Faculty of Biology, Studentski trg 16, 11000 Belgrade, Serbia*

² *University of Belgrade, Institute for Biological Research "Siniša Stanković" – National Institute of the Republic of Serbia, Bulevar despota Stefana 142, 11108 Belgrade, Serbia*

* ana.milicevic@bio.bg.ac.rs

Due to their high water temperature and special water chemistry, thermal springs offer unique ecological conditions for microbial communities. They are considered to be very interesting and important habitats for the study of algal flora, including diatom biodiversity. However, their occurrence in Serbian thermal springs is scarcely investigated. The aim of this study was to assess the diversity of the diatom community in five thermal springs in central Serbia (Vrujci spa, Bukovička spa, Omoljica, Ovčanska spa and Poljane). Samples were collected from natural thermal springs except from Bukovička spa, where they were taken from the tap. In Vrujci spa, samples were collected both from the tap and from the natural spring. During the autumn and winter in 2023, a total of 11 biofilm samples were collected with a sterile scalpel. The samples were treated with HCl and KMnO₄ in the laboratory, afterwards permanent diatom slides were made. The Carl Zeiss AxioImager.M1 light microscope with DIC optics, AxioCam MRc5 and AxioVision4.9 software were used for microscopic analysis. During survey, in total 82 diatom taxa belonging to 33 genera were identified. The most taxon-rich genera were *Nitzschia* and *Navicula* with 13 and 10 taxa, respectively. Our preliminary results show that the samples from the Vrujci spa have the highest diatom diversity (62 taxa) and from Bukovička the lowest (5 taxa). In the Vrujci spa, 40 taxa were identified in the natural thermal spring, while 22 were recorded at the tap. The highest temperature (25.1°C) was measured at this site compared to the other thermal springs. The dominant taxa were *Staurosira venter* and *Achnantheidium straubianum*, which distinguishes this natural thermal spring from the others. At the tap in Vrujci, the dominance of *Navicula veneta*, *Nitzschia*

palea and *Achnanthydium microcephalum* showed that the communities at natural and artificial sites differ greatly. In Bukovička spa, the most abundant taxa included *N. palea* and *N. veneta*. In the Omoljica thermal spring, 19 taxa were identified with dominance of *N. palea*, followed by *Gomphonema parvulum* and *N. veneta* with slightly lower abundances. In Poljane, *N. palea* and *A. microcephalum* were dominant from 11 recorded taxa. In Ovčanska spa, *Nitzschia thermaloides* was found to be predominant. In addition, the other 18 taxa found at this thermal spring occur with very low abundances. Additional taxonomic insights are required to more precisely define the diatom communities and the ecology of the taxa inhabiting thermal springs. Besides, occurrence of rare species can be expected in this types of extreme habitats.

AUTHOR INDEX

Abarca Nélida	76, 89, 91, 127, 158	Blanco Saúl	108, 138, 169
Abresch Heidi	188	Bo Tiziano	161
Ács Éva	129	Bohunická Markéta	70
Ağaoğlu Cemre	210	Bona Francesca	161
Aktan Yelda	110	Bonačić Tina	143, 145
Aleksovski Boris	167	Bondar-Kunze Elisabeth	171
Alverson Andrew J.	65	Borrego-Ramos María	138, 169
Amaral Mailor Mailor Wellington		Borucinska Ewa	58
Wedig	188	Bosak Sunčica	73, 99, 141, 182
Andrade Luiz	175	Boshaleska Ana	191
Angeli Nicola	17, 123	Boski Tomasz	112
Arapov Jasna	46, 143, 145	Bouchez Agnès	15, 127
Araujo Cassandra	63	Bouhameur Mansour	194, 201
Arnaud Elena	163	Bourquin Massimo	82, 156
Arsad Sulastri	116	Brandani Jade	82
Ashworth Matt P.		Brighenti Stefano	173
	24, 26, 40, 65, 84, 141	Bruno Maria	173
Assaf Mahmud	197	Brytka Karolina	65
Audoor Sien	54	Buchner Dominik	71
Augustyniak Jakub	58	Buczek Krzysztof	199
Baciu Calin	169	Burfeid Castellanos Andrea M.	
Bąk Małgorzata	108, 115, 116		15, 31, 71, 134, 165, 179, 212
Bakrač Ana	46	Bušelić Garber Ivana	143
Barinova Sophia	111	Busi Susheel	82, 156
Battin Tom J.	82, 156	Bužančić Mia	46, 145
Beauger Aude	106	Čačković Andrea	42
Belisova Darja	54	Cahová Tereza	121
Bella Valentina	163	Calleja Eman	15
Ben Khelifa Leila	148	Cantonati Marco	17, 123, 171
Berezovska Viktoriia	159	Cantoral-Uriza Enrique	127
Bernal-Glen Daniel F.	148	Caput Mihalić Katarina	21
Bertoldi Walter	80	Cardoso Vera	19
Bešta Tomáš	70, 202	Carmona-Jiménez Javier	127
Beszteri Bánk		Cerasino Leonardo	80, 173
	31, 71, 134, 136, 165, 179, 189, 212	César Edgley A.	147
Beszteri Sára	134, 136	Cesarini Giulia	195
Bilcke Gust	54	Chang Aimee Caye G.	188
Bilous Olena	123, 171	Chattová Barbora	121
Bíró Tibor	129	Chavaux Rémi	97
Bjelica Vukašin	154	Chelly Hana	148

Chen Jianfang	148	Sónia Marisa	208
Chonova Teofana	127	Górecka Ewa	
Cias Renata	87		26, 40, 84, 116, 140, 204, 206
Cid-Rodríguez María	17, 123	Gourvil Priscillia	17
Conley Daniel J.	65	Grammer Markus	22
Crossetti Luciane O.	125	Greenwood Megan	188
Cruz Sónia	19, 36	Grego Michele	17
Csabai Zoltán	15	Grigorszky István	129
Dąbek Przemysław	26, 58, 204, 206	Guella Graziano	17
Dani Mimoza	71, 134, 212	Haan Myriam	95
Darling Joshua	32	Hamadai Ali	201
Davidovich Nikolai	26	Hamilton Paul B.	
Davidovich Olga	26		106, 108, 110, 111, 112, 114
de Haan Myriam	99	Hamrová Hana	202
de la Hoz Camino F.	138	Hamsher Sarah E.	188
de Sá Correia de Sousa Isabel	208	Hanžek Nikola	104
Demetrio Mora	127	Hasan Ozren	21
Dobosy Péter	129	Hauer Tomáš	202
Dohnalová Petra	202	Hauerová Radka	70
Dorrell Richard	10	Hein Thomas	171
Dreßler Mirko	44	Hinić-Jordanovska Jelena	167
Dulias Katharina	197	Hrbáček Filip	121
Dupčić Radić Iris	180, 184	Ikudaisi Catherine	188
Ekmanis Toms	141	Ilijanić Nikolina	21
Ertorun Nesil	112, 114, 194, 201	Jahn Regine	76, 89, 91, 127, 158
Ezzat Leïla	82, 156	Jakovljević Olga	150, 154
Falasco Elisa	161, 163	Janßen Marjan	27
Fernandes Pedro	19	Jasinski Christina	71, 136
Figus Cécile	67	Jasprica Nenad	180
Filek Klara	141	Jennings Anne	48
Frohn Alison	70	Jeon Yebin	69
Funk Andrea	171	Jimenez-Gomez Francisco	169
Galović Ines	21	Jin Jeong	131, 137
Gardin Silvia	148	Johansen Jeffrey	70
Gastineau Romain	26, 40, 84, 116, 140	Jovanovska Elena	103, 189
Gebeshuber Ille C.	22	Juanes José A.	138
Gladenkov Andrey Yu.	67	Junqueira Maria	125
Gligora Udovič Marija	104, 119, 141	Jurina Dunja	119
Goessling Johannes W.	19, 24, 36, 208	Jüttner Ingrid	93, 101, 117
Goia Goia	78	Kahlert Maria	28, 132
Golubeva Aleksandra	204	Kanjer Lucija	141
Gomes Ana	112	Karsten Ulf	27, 30, 43, 44
Gonçalves da Cruz		Kaštovský Jan	202

Kesbiç Işıl	108	Mamanazarova Karomat	114
Khim Jong Seong	69, 75	Mamos Tomasz	175
Kierzek Agnieszka	204	Mann David G.	34, 40, 56, 84, 140
Kim Byeol	131	Manning Schonna R.	24
Kim Byoung-Seok	131, 137	Marchetto Aldo	195
Kim Hyesuk	69	Markvartová Jana	202
Kim Minseop	69	Matek Antonija	141, 182
Kim So-Yeon	131, 137	Matić Frano	46
Kiss Keve T.	129	Maule Alfredo	173
Kloster Michael	31, 71, 165, 212	Mayombo Ntambwe Albert Serge	71, 165, 212
Kochoska Hristina	82, 156	McKenzie Caroline	186
Kociolek Patrick J.	188	McKnight Diane	32
Kohler Tyler J.	32, 82, 121, 132, 156	Mesić Saša	21
Kollár Jan	82, 132, 156	Michoud Grégoire	82, 156
Kopalová Kateřina	82, 121, 132, 156	Miguel Raquel São	36, 208
Kopanja Tamara	167	Miko Slobodan	21
Korponai János	129	Milan Manuela	50
Korzeń Katarzyna	199	Milić Roje Blanka	46, 143
Kotyzová Lucie	70	Miličević Ana	150, 154
Krizmanić Jelena	150, 152, 154	Miličić Maja	177
Krstić Svetislav	167	Miller Scott	188
Krzywda Marta	206	Milovanović Željka	150
Kulaš Antonija	119	Mitic-Kopanja Danijela	191
Kurzydowski Krzysztof J.	58	Mohamad Heba	76, 158
Kusber Wolf-Henning	52, 76, 89, 91, 93, 127, 158	Mora Demetrio	28
Lam Daryl W.	24	Morais Manuela	15
Lami Andrea	50	Moreira Anthony P.	19, 36, 208
Lange-Bertalot Horst	84, 123	Moser Marie-Christine	171
Laviale Martin	212	Moura Delminda	112
Ledinski Maja	21	Mucko Maja	141, 182
Lefnar Radek	202	Musazzi Simona	50, 195
Lemieux Claude	84	Nam Onyou	186
Lepen Pleić Ivana	143	Nesterovich Anna	48
Levkov Zlatko	103, 119, 123, 189, 191	Ninčević Gladan Živana	46, 143, 145
Li Jingchun	188	Noureddine Bachiri	194
Ljubešić Zrinka	141, 182	Novais Maria H.	15
Lopez-Garcia Martin	19, 24	Nývlt Daniel	121
Lorenz Armin	15	Ognjanova-Rumenova Nadja	38
Luthfi Oktiyas Muzaky	115	Olenici Adriana	169
Lüttjohann Lena	197	Olszyński Rafał M.	40
Mackay Anson W.	12	Oreshkina Tatyana V.	67
Mackinder Luke	186	Orlić Sandi	42

Özen Volkan	67	Schultz Konrad	44
Özkan Altan	210	Schuster Tanja	52
Pane Elya Putri	140	Schwalb Antje	197
Park Jinsoo	69, 75	Schwarz Anja	197
Park Jong-Gyu	131, 137	Šeiriene Vaida	193
Pasković Nika	180, 184	Sevindik Tuğba Ongun	106
Peeters Valérie	95	Sezgin Tuğçe	210
Pernecker Bálint	15	Sgro Gerald V.	70
Peszek Łukasz	111	Sims Patricia	147
Peter Hannes	82, 156	Skejić Sanda	46, 145
Petz Thomas	22	Skibbe Oliver	76, 89, 91, 127, 134, 158
Piana Lucia	123	Slavevska-Stamenković Valentina	167
Pickering Rebecca	65	Smirnov Pavel	67
Pimentel Iris	71	Snigirova Anastasiia	159
Pinseel Eveline	121	Solak Cüneyt Nadir	84, 106, 108, 110, 111, 112, 114, 140, 194, 201
Popović Slađana	150, 154	Sömek Haşim	106
Pottiez Margaux	52, 73, 97, 99, 101, 117	Somogyi Boglárka	49
Pradalier Cédric	212	Šoreva Irina	167
Prelle Lara R.	43, 44	Sosnina Irina	193
Prochnow Maximilian	197	Sousa Isabel	36
Puşçaş Mihai	78	Spaulding Sarah A.	48
Raposka Neda	103	Spitale Daniel	17, 123
Rehsen Philipp M.	71	Spyra Marzena A.	71, 134
Reichardt Erwin	97	Stancheva Rosalina	127
Renaudie Johan	67	Stanić Ivana	42
Rho Yangrae	69, 75	Stanish Lee	32
Richoz Sylvain	65	Stanković Igor	104
Rijdsdijk Nadine	54	Straka Maja	46
Rimet Frédéric	15, 56, 127	Subakov Simić Gordana	150
Risjani Yenny	115, 140	Šušnjara Mirela	104, 177
Rober Allison R.	63	Şuteu Anca-Mihaela	78
Rogora Michela	195	Tapolczai Kálmán	49
Roychoudhury Piya	204	Tenci Maria	80
Ruiz-Pino Diana	148	Thies Hansjörg	50
Rybak Mateusz	116	Toffolon Marco	80
Saber Abdullah A.	123	Tolotti Monica	50, 80, 173
Saci Mennad	194	Tomášek Petr	202
Salzburger Walter	9	Tomašević Tina	143, 145
Sánchez-Astráin Begoña	138	Tomášková Eva	202
Santolini Carlotta	50	Trajanovski Sašo	175
Sarreira Rita	19	Trenti Francesco	17
Schimani Katherina	76, 134, 158	Trobajo Rosa	40, 84, 140

Turan Ata	110	Witkowski Jakub	67, 147
Turmel Monique	84	Wojtal Agata Z.	199
Vacca Gianluca	161	Wyatt Kevin	63
Vadkertı Edit	129	Yedidađ Ferhan	111, 112, 114
Van de Vijver Bart	52, 56, 73, 93, 95, 97, 99, 101, 117, 121, 132, 163	Yeh Ping-Hung	58, 206
van Nieuwenhoven Richard W.	22	Yildiz Halil	110
Vandepoele Klaas	54	Yilmaz Elif	84, 106, 108, 140
Vasiljević Božica	154	Zagatová Iva	202
Venkataramanan Aishwarya	212	Zaova Dušica	189, 191
Vermiert Anna-Maria	71	Zech Roland	197
Vidakovic Danijela	71, 152, 165, 212	Želazna-Wieczorek Joanna	175
Viso Raquel	138	Zglobicka Izabela	58, 206
Vlaović Ljubica	152	Zidarova Ralitsa	73, 99
Vörös Lajos	49	Zimmermann Jonas	28, 76, 89, 91, 127, 132, 134, 158
Vošická Tereza	82	Žižek Marta	141
Voto Giulio	173	Žižek Slavko	59
Vyverman Wim	54	Žižić Nakić Antonija	177
Wetzel Carlos E.	56, 97, 125, 127, 163	Zorza Raffaella	163
Wilfert Katharina	95	Zsigmond Andreea Rebeka	78
Williams David M.	56, 117, 147	Zubíčková Kateřina	202
Witkowski Andrzej	26, 58, 84, 115, 140, 204, 206	Žutinić Petar	119