



*Diversity and ecology of algae: spatial and temporal changes*

# 41<sup>ST</sup> INTERNATIONAL CONFERENCE OF THE POLISH PHYCOLOGICAL SOCIETY

## CONFERENCE PROGRAMME

3-7/6/2024

POZNAŃ, BĘDLEWO - POLAND



Ministerstwo Nauki  
i Szkolnictwa Wyższego



Doskonała  
Nauka



UCZELNIA  
BADAWCZA  
INŻYNIERIA DOKONANEJ



Wydział  
Biologii

# 41<sup>ST</sup> INTERNATIONAL CONFERENCE OF THE POLISH PHYCOLOGICAL SOCIETY

*Diversity and ecology of algae: spatial and temporal changes*

Poznań - Będlewo, Poland

June 3-7, 2024

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Ministerstwo  
Edukacji i Nauki



**Doskonała  
Nauka**

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**UCZELNIA  
BADAWCZA**  
INICJATYWA DOSKONAŁOŚCI

**41<sup>ST</sup> INTERNATIONAL CONFERENCE OF THE POLISH  
PHYCOLOGICAL SOCIETY**

*Diversity and ecology of algae: spatial and temporal changes*

Poznań - Będlewo, Poland

June 3-7, 2024

**The conference organized under the honorary auspices  
of the Rector of Adam Mickiewicz University, Poznań**

**Prof. dr hab. Bogumiła Kaniewska**



UNIwersytet  
IM. ADAMA MICKIEWICZA  
W POZNANIU

**The conference organized by:**

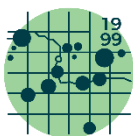


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**GRADIENT Tomasz Joniak**



**Zespół Parków  
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**Prof. dr hab. Konrad Wołowski**, W. Szafer Institute of Botany, Polish Academy of Sciences, Kraków, Poland

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**Dr hab. Beata Messyasz - ass. prof.** Adam Mickiewicz University, Poznań, Poland, **Chair of the Local Organizing Committee**

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**Mgr Bartosz Brzezicha,** Adam Mickiewicz University, Poznań, Poland

**Mgr Julia Gostyńska,** Adam Mickiewicz University, Poznań, Poland

**Mgr Cyprian Kowalczyk,** Adam Mickiewicz University, Poznań, Poland

**Mgr Zofia Marek,** Adam Mickiewicz University, Poznań, Poland

**Mgr Mateusz Draga,** Adam Mickiewicz University, Poznań, Poland

**Mgr Magdalena Strugała,** Adam Mickiewicz University, Poznań, Poland

## OUTLINE OF THE PROGRAMME

### Monday, June 3, 2024

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<b>8:00 - 11:00</b>	Registration of the Conference Participants
<b>9:30 - 11:00</b>	Visiting the Faculty of Biology and exhibits in the Natural History Collections
<b>11:00 - 11:30</b>	Opening Ceremony
<b>11:30 - 13:45</b>	Plenary session
<b>13:45 - 14:45</b>	Lunch at the Faculty of Biology Hall
<b>15:00 - 17:00</b>	Transfer and registration in Będlewo
<b>17:30 - 19:00</b>	Visiting the Palace in Będlewo
<b>19:00</b>	Dinner

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### Tuesday, June 4, 2024

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<b>7:30 - 08:30</b>	Breakfast
<b>9:00 - 11:00</b>	Session 1
<b>11:00 - 11:30</b>	Coffee break
<b>11:30 - 13:30</b>	Session 2
<b>14:00 - 15:00</b>	Lunch
<b>15:00 - 16:15</b>	Session 3
<b>16:15 - 16:45</b>	Coffee break
<b>16:45 - 19:00</b>	Microscope workshop
<b>19:00 - 20:00</b>	Dinner
<b>20:00</b>	Social event

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### **Wednesday, June 5, 2024**

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<b>7:30 - 08:30</b>	Breakfast
<b>9:00 - 11:00</b>	Session 4
<b>11:00 - 11:30</b>	Coffee break
<b>11:30 - 13:30</b>	Session 5
<b>14:00 - 15:00</b>	Lunch
<b>15:00 - 18:30</b>	Visiting the historical and natural complex of Rogalin
<b>19:30</b>	Bonfire

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### **Thursday, June 6, 2024**

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<b>7:30 - 08:30</b>	Breakfast
<b>9:00 - 11:00</b>	Session 6
<b>11:00 - 11:30</b>	Coffee break
<b>11:30 - 13:05</b>	Session 7
<b>14:00 - 15:00</b>	Lunch
<b>15:00 - 17:00</b>	Poster session
<b>17:00 - 19:00</b>	Meeting of the Polish Psychological Society
<b>20:00</b>	Conference banquet

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### **Friday, June 7, 2024**

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<b>7:30 - 08:30</b>	Breakfast
<b>9:00 - 10:00</b>	Departure

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## DETAILED PROGRAMME

### Monday, June 3, 2024

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<b>8:00 - 11:00</b>	Registration of the Conference Participants
<b>9:30 - 11:00</b>	Visiting the Faculty of Biology and exhibits in the Natural History Collections
<b>11:00 - 11:30</b>	Opening Ceremony
<b>11:30 - 13:45</b>	<b>Plenary session</b> <i>Chairman: Ryszard Goldyn</i>
<b>11:30 - 12:15</b>	<b>Bogdan Chojnicki</b> Climate change and its consequences for the ecosystems
<b>12:15 - 13:00</b>	<b>Anusuya Willis</b> Resilience in diversity: population genomics in environmental management
<b>13:00 - 13:45</b>	<b>John Patrick Kocielek</b> Symbiosis and algal evolution: a general overview and focus on the diatom order Rhopalodiales
<b>13:45 - 14:45</b>	Lunch at the Faculty of Biology Hall
<b>15:00 - 17:00</b>	Transfer and registration in Będlewo
<b>17:30 - 19:00</b>	Visiting the Palace in Będlewo
<b>19:00</b>	Dinner

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### Tuesday, June 4, 2024

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<b>7:30 - 08:30</b>	Breakfast
<b>9:00 - 11:00</b>	Session 1: <i>Diversity of algae and cyanobacteria in various habitats</i> <i>Chairman: Konrad Wołowski</i>
<b>9:00 - 9:45</b>	<b>Naicheng Wu</b> Riverine algal biodiversity under changing flow regime

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<b>9:45 - 10:10</b>	<b>Martha Susanna Janse van Vuuren, Anatoliy Levanets</b> Hidden Treasures: Exploring unique and rare algae in the Okavango Delta, Botswana
<b>10:10 - 10:35</b>	<b>Wiktoria Chudzik, Katarzyna Palińska, Ilona Zloch</b> Marine endolithic Cyanobacteria – distribution and biodiversity
<b>10:35 - 11:00</b>	<b>Paulina Nowicka-Krawczyk, Julia Sulkowska, Michał Komar, Beata Gutarowska</b> Green algae in aerial biofilms of building materials from Central Poland and their growth strategy on a micro-scale

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<b>11:00 - 11:30</b>	Coffee break
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<b>11:30 - 13:30</b>	Session 2: <i>The timeless potential of algae research</i> <i>Chairman: Elżbieta Wilk-Woźniak</i>
<b>11:30 - 12:05</b>	<b>Nada Tokodi, Ewa Latkowska, Barbara Klimczak, Kinga Kłodawska, Przemysław Malec, Anusuya Willis, Mikołaj Kokociński, Adam Antosiak, Dariusz Dziga</b> <i>Raphidiopsis raciborskii</i> response to chill/light stress
<b>12:05 - 12:30</b>	<b>Łukasz Wejnerowski, Aleksandra Pełechata, Michał Rybak, Oskar Kamiński, Agnieszka Piasecka, Józef Piotr Antonowicz, Gabriela Belniak, Marcin Krzysztof Dziuba, Judita Koreivienė, Jussi Meriluoto, Piotr Dawidowicz</b> The effect of carbon dioxide and temperature elevation on the performance of freshwater bloom-forming cyanobacteria and their potential to invade coastal Baltic Sea waters
<b>12:30 - 12:55</b>	<b>Beata Messyasz, Natalia Kuczyńska-Kippen</b> Changes in algae communities in the microlayer of various types of substrate
<b>12:55 - 13:20</b>	<b>Mariusz Pełechaty, Aleksandra Pełechata, Małgorzata Strzałek, Lech Kufel, Karina Apolinarska, Marcin Becher, Elżbieta Biardzka, Michał Brzozowski, Lech Kaczmarek,</b>

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	<b>Rafał Kiełczewski, Grzegorz Kowalewski, Andrzej Pukacz, Michał Woszczyk</b> Charophytes and their ecosystem services in the era of climate change
<b>14:00 - 15:00</b>	Lunch
<b>15:00 - 16:15</b>	Session 3: <b>Flagellated algae</b> Chairman: <b>Magdalena Grabowska</b>
<b>15:00 - 15:35</b>	<b>Enikő Török -Krasznai, Gábor Borics, Judit Görgényi, Lerf Verona, Tibor Kisantal, Kiss Stefénia, Áron Lukács, Zsuzsanna Nemes-Kókai, István Tóth, Viktória B-Béres</b> Cryptomonads in Hungary: taxonomy and distribution
<b>15:35 - 16:15</b>	<b>Agnieszka Napiórkowska-Krzebietke</b> Information on <i>Prymnesium parvum</i> - taxonomy, occurrence, bloom intensity, ecology
<b>16:15 - 16:45</b>	Coffee break
<b>16:45 - 19:00</b>	Microscope workshop
<b>19:00 - 20:00</b>	Dinner
<b>20:00</b>	Social event

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### Wednesday, June 5, 2024

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<b>7:30 - 08:30</b>	Breakfast
<b>9:00 - 11:00</b>	Session 4: <b>Taxonomy and diversity of cyanobacteria</b> Chairman: <b>Hanna Mazur-Marzec</b>
<b>9:00 - 9:45</b>	<b>Petr Dvořák, Svatopluk Skoupý, Aleksandar Stanojković</b> Taxonomy of cyanobacteria in the age of large-scale genomic datasets
<b>9:45 - 10:10</b>	<b>Aleksandar Stanojković, Svatopluk Skoupý, Hanna Johannesson, Petr Dvořák</b> Ecological, genetic, and spatial processes cause

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	diversification in the global continuum of <i>Microcoleus</i> species
<b>10:10 - 10:35</b>	<b>Iwona Jasser, Nataliia Khomutovska, Lukasz Łach, Jan Kwiatowski, Małgorzata Suska-Malawska, Małgorzata Sandzewicz</b> Unraveling the diversity of cyanobacteria and heterotrophic bacteria in biological soil crusts of hot and cold deserts
<b>10:35 - 11:00</b>	<b>Svatopluk Skoupy, Petr Dvořák, Aleksandar Stanojković, Dale A. Casamatta, Calahan McGovern</b> Population-genomics based revision of the crust-forming cyanobacterium <i>Microcoleus</i> spp.
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<b>11:00 - 11:30</b>	Coffee break
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<b>11:30 - 13:30</b>	Session 5: <i>Ecology of algae and cyanobacteria</i> Chairman: <i>Barbara Leoni</i>
<b>11:30 - 11:55</b>	<b>Flavia Dory, Veronica Nava, Morena Spreafico, Valentina Soler, Barbara Leoni</b> Climate change and nutrient fluctuation affect the phytoplankton community through complex pathways in a deep mesotrophic lake
<b>11:55 - 12:20</b>	<b>Judit Görgényi, Zsuzsanna Kókai, Gábor Borics, Pál Tóth, Gábor Simay, Esther Sebastián-Gonzalez, Ádám Lovas-Kiss</b> Microscopic stowaways: Waterbirds as dispersal vectors of microalgae
<b>12:20 - 12:45</b>	<b>Rafał M. Olszyński, Piotr K. Zakrzewski, Julia Sulkowska, Joanna Żelazna-Wieczorek</b> Post-mining reservoirs as promising habitats for diatoms in the era of climate change
<b>12:45 - 13:10</b>	<b>Maja Łukomska-Kowalczyk, Katarzyna Jankowska, Bożena Zakryś</b> Spatial and temporal changes in autotrophic euglenids

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	communities – based on the group specific DNA metabarcoding approach
<b>13:10 - 13:35</b>	<b>Tumer Orhun Aykut, Robin Michael Crucitti-Thoo, Agnieszka Rudak, Iwona Jasser</b> Phytoplankton structure and invasive cyanobacterial species of Northeastern Poland and their associations with environmental parameters
<b>13:35 - 14:00</b>	<b>Hanna Mazur-Marzec, Robert Konkel, Michał Grabski, Marta Ceglowska</b> Diversity and bioactivity of metabolites produced two Baltic filamentous cyanobacteria, <i>Pseudanabaena galeata</i> CCNP1313 and <i>Nostoc edaphicum</i> CCNP1411
<b>14:00 - 15:00</b>	Lunch
<b>15:00 - 18:30</b>	Visiting the historical and natural complex of Rogalin
<b>19:30</b>	Bonfire (incl: Handing over a symbolic box of matches to the organizer of the next meeting)

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#### Thursday, June 6, 2024

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<b>7:30 - 08:30</b>	Breakfast
<b>9:00 - 11:00</b>	Session 6: <i>Cyanobacterial blooms and metabolites</i> Chairman: <i>Barbara Pawlik-Skowrońska</i>
<b>9:00 - 9:45</b>	<b>Gábor Vasas</b> Spatial and temporal appearances of selected cyanobacterial metabolites in the Carpathian basin
<b>9:45 - 10:10</b>	<b>Robin Crucitti-Thoo, Wojciech Tylmann, Iwona Jasser</b> A ~250-year long sedimentary DNA record of cyanobacterial Harmful Algal Blooms (cyanoHABs) from Lake Żabińskie, in North-Eastern Poland
<b>10:10 - 10:35</b>	<b>Adam Antosiak, Barbara Klimczak, Anna Drabik, Bożena</b>

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	<p><b>Skupień-Raban, Piotr Suder, Sigitas Sulcius, Nada Tokodi, Joachim Kopka, Aleksander Erban, Dariusz Dziga</b> Towards understanding the mechanisms of cyanophage infection – combined proteomics and metabolomics</p>
<b>10:35 - 11:00</b>	<p><b>Agnieszka Rudak, Kadirova Gulchehra Khakimovna, Khuzhamshukurov Nortozi Abdikhalikovich, Sattarov Masud, Iwona Jasser</b> Toxic cyanobacteria in Uzbekistan rice fields – toxicity genes found in water samples indicating a possible risk</p>
<b>11:00 - 11:30</b>	Coffee break
<b>11:30 - 13:05</b>	<p>Session 7: <i>Applied algology</i> Chairman: <i>Joanna Żelazna-Wieczorek</i></p>
<b>11:30 - 12:15</b>	<p><b>Judita Koreivienė</b> Applying circular economy principles to restore freshwater ecosystems through the harvesting of algae and cyanobacteria combined with the transforming of biomass into valuable bioproducts</p>
<b>12:15 - 12:40</b>	<p><b>Konrad Wołowski, Joanna Lenarczyk, Joanna Augustynowicz, Ewa Sitek, Rafał Przejczowski, Daniel Ociński, Hanna Pińkowska, Irena Jacukowicz-Sobala</b> Algae in chromate sewage: composition, functioning and potential benefits</p>
<b>12:40 - 13:05</b>	<p><b>Kottage Saduni Gayanthika Kottage, Hewa Bandulage Asanthi, Lishani Nisansala Wijewardene</b> Responses of <i>Anabaena azollae</i> for different organic fertilizers; cow dung &amp; banana peel water</p>
<b>14:00 - 15:00</b>	Lunch
<b>15:00 - 17:00</b>	Poster session
<b>17:00 - 19:00</b>	Meeting of the Polish Phycological Society
<b>20:00</b>	Conference banquet

**Friday, June 7, 2024**

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<b>7:30 - 08:30</b>	Breakfast
<b>9:00 - 10:00</b>	Departure

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## POSTER SESSION

### Poster numbering

1. Arsad Sulastri, Bąk Małgorzata, Gastineau Romain, Rybak Mateusz, Górecka Ewa  
Taxonomical Identification of benthic diatoms from North Celebes, Indonesia
2. Błaszczuk Agata, Toruńska-Sitarz Anna, Zembek Aniela  
Airborne cyanotoxins - the least known route of exposure
3. Budziak Martyna, Krztoń Wojciech, Walusiak Edward, Konkel Robert, Mazur-Marzec Hanna, Wilk-Woźniak Elżbieta  
Diversity and seasonal variation of cyanobacterial secondary metabolites in shallow waterbodies
4. Budzyńska Agnieszka, Klimaszyk Piotr, Rybak Michał  
Year to year fluctuations in the summer phytoplankton of the Płociczna river system in Drawieński National Park (NE Poland)
5. Cegłowska Marta, Walczak Agnieszka  
Effects of pH on the cyanobacterium *Synechococcus rubescens* SAG 3.81
6. Ciempiel Wioleta, Czemińska Magdalena, Jarosz-Wilkotazka Anna, Krzemińska Izabela  
*Coelastrella vacuolata* as a source of microalgal extracellular polymeric substances (EPS)
7. Czerwik-Marcinkowska Joanna, Ociepa Anna Maria, Piksa Krzysztof, Stebel Adam, Wojciechowska Anna  
Diversity of airborne algae and cyanobacteria from active Mroźna Cave (Tatra Mountains), Poland
8. Dembowska Ewa Anna, Jankowiak Emilia



Cyanobacterial bloom in a recreational lake, preliminary study before planned restoration

9. Dory Flavia, Nava Veronica, Di Mauro Biagio, Traversa Giacomo, Nedbalová Linda, Soler Valentina, Toniolo Lorenzo, Leoni Barbara  
Cyanobacteria and microalgae assemblages in cryoconite holes (Victoria Land, Antarctica)
10. Gostyńska Julia, Messyasz Beata  
Ecological implications of *Cladophora glomerata* (L.) Kütz. blooms: Seasonal variability and polyphenolic compounds
11. Grabowska Magdalena, Wojtal Agata Z., Lewandowicz Wanessa  
The rare and poorly-known diatom species (Bacillariophyta) in springs of Eastern Poland
12. Hawrot-Paw Małgorzata  
Microalgae as a sustainable source of protein feed
13. Hindáková Alica, Košuthová Alica, Dvořák Petr, Wedin Mats  
*Macrochaete oelandica* sp. nov., the second cyanobiont of lichen *Placynthium nigrum* in Europe
14. Ibrahimov Sarkhan, Pełechaty Mariusz  
Submerged vegetation in Lake Góreckie (Wielkopolski National Park): A case study of charophyte resilience in a eutrophic environment
15. Issayeva Akmaral  
Technology for producing algae fertilizer based on phosphorus-containing and lignite-containing waste from the South of Kazakhstan
16. Jankowiak Emilia, Dembowska Ewa  
Diversity and activity of bacterioplankton in shallow lakes during cyanobacterial blooms
17. Janse van Vuuren Martha Susanna, Levanets Anatolij, Zakryś Bożena

Taxonomical checklist of southern African photosynthetic and heterotrophic euglenoids: preparation launched

18. Joniak Tomasz, Rosińska Joanna, Rybak Michał  
The potential threat assessment of phytoplankton blooms for the isoetids range in a mid-forest lobelia lake
19. Joniak Tomasz, Rybak Michał, Rosińska Joanna  
The spatial changes of summer phytoplankton against the PAR availability in Biezdruchowskie Lake
20. Kapsalyamov Bauyrzhan, Zholmuratova Gulzat  
Application of algae to reduce toxicity of hexavalent chromium in surface waters with its conversion to non-toxic trivalent chromium.
21. Karosienė Jūratė, Karaliūtė Kamilė, Janušaitienė Kornelija, Koreivienė Judita  
Wild cyanobacterium *Aphanizomenon flos-aquae* biomass: potential source for phycobiliproteins extraction and purification
22. Kasperovičienė Jūratė, Didžiokaitė Patricija  
Bioactive metabolites in wild cyanobacterial biomass from the Kaunas Reservoir (Lithuania)
23. Kiss Stefánia, Nemes-Kókai Zsuzsanna, Lukács Áron, Boda Pál, Márton Kamilla, Török-Krasznai Enikő, B-Béres Viktória  
To survive or not to survive – benthic diatoms in lowland intermittent streams?
24. Kochman-Kędziora Natalia, Noga Teresa, Olech Maria  
The structure of freshwater diatom assemblages in the vicinity of the Antarctic research station
25. Kochman-Kędziora Natalia, Bylak Aneta, Kukuła Krzysztof  
Benthic communities as a tool for assessing the ecological status of a flysch stream

26. Konkelt Robert, Cegłowska Marta, Mazur-Marzec Hanna  
Toxicity of prymnesins produced by *Prymnesium parvum* from the Odra River
27. Kowalczyk Cyprian, Kokociński Mikołaj, Apolinarska Karina, Cwynar Les C., Pleskot Krzysztof  
Environmental variables relationship to subfossil diatoms assemblages in coastal lakes under the marine impact: examples from southern Newfoundland (Burin Peninsula)
28. Kozak Anna, Serocki Marek  
Phytoplankton community composition of urban Swarzędzkie Lake
29. Krzemińska Izabela, Ciempiel Wioleta, Szymańska Marlena  
Biomass production, lipid accumulation and fatty acid profile of *Eustigmatois calaminaris* under phytohormone supplementation and nutrient stress
30. Kuczyńska-Kippen Natalia, Kozak Anna, Celewicz Sofia  
Cyanobacteria response to habitat and catchment conditions
31. Lenarczyk Joanna, Wołowski Konrad, Augustynowicz Joanna, Kulig Bartosz  
Screening for algae effective in removal of plastic additives from wastewater
32. Lenard Tomasz, Małyk Maciej, Olech Marta, Martyna Aleksandra, Poniewozik Małgorzata, Boguszewska-Czubara Anna, Kochanowicz Elżbieta, Czubak Paweł, Kubiński Konrad  
Insights into macrophyte and algae competition: *Ceratophyllum demersum* as a source of anticancer agents
33. Marek Zofia, Messyasż Beata  
Day to night shift – vertical changes in structure of phytoplankton communities due to light intensity in Lake Durowskie

34. Márton Kamilla, Riba Milán, Vasas Gábor, B-Béres Viktória, Bácsi István  
Short-term changes of phytoplankton assemblages after sodium percarbonate treatment in a small reservoir
35. Messyasz Beata, Łęska Bogusława, Pankiewicz Radosław  
Differences and similarities in the functioning of *Cladophora glomerata* in a lake and a river
36. Messyasz Beata, Stefaniak Mati, Stępniak Julia  
Algal biodiversity in ephemeral water pool in the cultivated field
37. Nowakowski Ryszard Lubomir, Bąk Małgorzata, Dąbek Przemysław  
Diatoms biodiversity of Świna strait and Pomeranian Bay
38. Nowicka-Krawczyk Paulina, Banach Katarzyna, Żelazna-Wieczorek Joanna  
Expansion potential of yellow-green alga *Heterococcus caespitosus* over building materials in the temperate climate zone
39. Pasztaleniec Agnieszka, Weber Łukasz, Przygoda-Kuś Paula, Krawczyk Łukasz  
Laboratory ammonium treatments to suppress blooms of *Prymnesium parvum* - effects on phytoplankton community
40. Pawlik-Skowrońska Barbara, Bownik Adam, Pogorzelec Magdalena  
First report on adverse effects of cyanobacterial anabaenopeptins, aeruginosins, microginin and their mixtures with microcystin and cylindrospermopsin on aquatic plant physiology
41. Petrenas Gediminas, Karosienė Jūratė, Kazlauskas Martynas  
Response of freshwater periphytic diatoms to elevated cadmium concentrations: results of the experimental study
42. Pęczuła Wojciech, Kobos Justyna, Grzywaczewski Grzegorz

Algae and environmental policy: catastrophic fishkill in the Odra River as a case of meandering water management in Poland

43. Poniewozik Małgorzata, Yesayan Tigran, Beliaeva Olesya, Zięba Emil, Hambaryan Lusine  
First record of loricated euglenoids in mountain lakes of Lori Province, Armenia
44. Rybak Andrzej Stanisław, Woyda-Płoszczyca Andrzej Marek  
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