



8th International Conference of Young Naturalists
- "From Biotechnology to Environmental Protection"
- Interdisciplinary Meeting of Young Naturalists
7 - 9 November 2013, Zielona Góra

Faculty of Biological Sciences, A-8 building, Szafrana 1, Zielona Góra

Organizers and the Scientific Committee

The Organizing Committee:

- Ita Szczepańska – Head of the Organizing Committee
- Kamila Kacprzak
- Anita Leciejewska
- Ewelina Gronczewska

The Scientific Committee:

- dr Krystyna Walińska - Head of the Scientific Committee
- dr hab. Joerg Böehner, prof. UZ
- prof. dr hab. Beata Gabrys
- dr hab. Grzegorz Iszkuło, prof. UZ
- dr hab. Zbigniew Jakubiec, prof. UZ
- dr hab. Mariusz Kasprzak, prof. UZ
- prof. dr hab. Leszek Jerzak
- dr hab. Jacek Leluk, prof. UZ
- dr hab. Bartłomiej Najbar, prof. UZ
- prof. dr hab. Aleksander Sikorski
- prof. dr hab. Michał Stosik
- dr Marcin Bocheński
- dr Ewa Bok
- dr Renata Grochowalska
- dr Elżbieta Heger
- dr Dmytro Iakushenko
- dr Agnieszka Janiak-Osajca
- dr Andrzej Jurkowski
- dr inż. Andrzej Kasperski
- dr Beata Machnicka
- dr inż. Agnieszka Mirończyk
- dr Ewa Nowacka – Chiari
- dr inż. Julia Nowak - Jary
- dr Elżbieta Roland
- dr inż. Iwona Sergiel
- dr Anna Timoszyk
- dr Zbigniew Zawada
- mgr Olaf Ciebiera
- mgr Justyna Mazurek
- mgr Sebastian Pilichowski

Conference Schedule

Thursday 7.11.2013

8.30 - 12.00 Registration

Introductory session (room 115)

12.30 – 12.45 *Prof. dr hab. Leszek Jerzak,
dr Krystyna Walińska*

Opening ceremony

12.45 – 13.45 *Dr hab. Jacek Leluk, prof. UZ*

The inaugural lecture – “Lethal vitamins, insidious aspirin, and life – sustaining cholesterol; another view on the known substances”

14.00 – 15.00 Lunch (room 124)

Poster session (hall on the ground floor)

15.30 – 18.00 Presentations of posters by authors

Molecular biology
Biotechnology
Environmental Protection

Friday 8.11.2013

Plenary session

Biotechnology, Molecular biology (room 115)

Biotechnology

9.00 - 9.20 *Anna Grzybkowska (PhD student)
Lodz University of Technology, Faculty of
Chemistry*

Can chlorine kinetic isotope effect really serve as a mechanistic tool for uncatalyzed hydrolysis of atrazine? – an insight from a combination of experiment and computation.

9.20 - 9.40 *Milena Jabłońska (PhD student)
Gdańsk University of Technology,
Department Chemistry*

Microorganisms used for energy production

9.40 - 10.00 *Agnieszka Rusak (PhD student)
Department of Experimental Surgery and
Biomaterials Research, Faculty of Dentistry,
Wrocław Medical University*

The influence of natural phenolics on viability of L929-cells

10.00 – 10.30 Coffee Break (room 124)

10.30 – 10.50 *Maria Rybarczyk (PhD student)
Gdańsk University of Technology*

Carbon with high nitrogen content doped with platinum as cathodic material

10.50 – 11.10 *Lucyna Sławik-Dembiczak (PhD student)
Czestochowa University of Technology,
Institute of Environmental Engineering*

Biogas purification using microalgae

Molecular biology

- 11.10 – 11.30 **Kamila Duś-Szachniewicz** (PhD student)
Department of Pathology, Wrocław Medical University How can human cell lines, body fluids and tissues be useful in oncoproteomics ?
- 11.30 – 11.50 **Tomasz Gulanicz**
Nicolaus Copernicus University, Toruń The accumulation of poly(A)RNA in *Arabidopsis thaliana* coilin-mutated cells of NCB-1 and PCB-1 models
- 11.50 – 12.10 **Kamila Kacprzak**
University of Zielona Góra, Faculty of Biological Sciences Anion exchanger 1 and its involvement in erythrocyte and kidney disorders
- 12.10 – 12.30 **Natalia Machałek** (PhD student),
Karolina Kacprzak (PhD student)
University of Warmia and Mazury, Faculty of Agriculture and Environmental Management, Olsztyn Thickness of electrophoresis gel – what is the influence on result of the electrophoresis
- 12.30 – 12.50 **Agnieszka Machul** (PhD student)
Department of Microbiology, Jagiellonian University Medical College, Kraków Does the concentration of glucose affects the quantity and biochemical structure of the *P. aeruginosa* biofilm formed in patients with chronic diabetic foot wounds?
- 12.50 – 13.10 **Diana Mikołajczyk** (PhD student)
Department of Microbiology, Jagiellonian University Medical College, Kraków Enzyme inhibitors effect on the biofilm formation by *Pseudomonas aeruginosa* isolated from chronic diabetic foot infection
- 13.10 – 13.30 **Katarzyna Mystkowska** (PhD student)
University of Gdansk, Faculty of Biology Barkoding DNA as molecular identification key to protected vascular plant in Gdansk Pomerania
- 13.30 – 13.50 **Ludwik Odrzywołek** (PhD student)
Jagiellonian University Medical College, Kraków The distribution of apolipoprotein E gene polymorphism in a Polish Rural population
- 13.50 – 14.10 **Mateusz Rawski** (PhD student)
Poznań University of Life Sciences, Faculty of Animal Breeding and Biology, Department of Animal Nutrition and Feed Management The effects of dietary probiotics on the growth performance and selected microflora populations of common musk turtle (*Sternotherus odoratus*)
- 14.10 – 15.10 Lunch (room 124)**
- 15.20 – 15.40 **Ludwik Odrzywołek** (PhD student)
Jagiellonian University Medical College, Kraków The structure of sensitizations among patients from Malopolska Region diagnosed for contact allergy: Comparison of the patch test results depending on the composition of the diagnostic series
- 15.40 – 16.00 **Łukasz Smoliński**
University of Zielona Góra, Faculty of Biological Sciences microRNAs (miRNAs) and Copy Number Variations (CNVs) – new revolution in the field of molecular biology and genetics
- 16.00 – 16.20 **Marta Woźniak** (PhD student)
Department of Pathology, Wrocław Medical University Relationship between the oxidative stress-associated Src activator and c Src tyrosine kinase in the mechanism of photodynamic therapy
- 16.20 – 16.40 **Barbara Ziółkowska** (PhD student)
Department of Pathology, Wrocław Medical University The autophagic response to photodynamic therapy

Anthropology, Zoology (room 213)

Anthropology

- 9.00 - 9.20 **Wahili Chiari Arcia**
Institute of Archaeology, University of Wrocław Biological and cultural aspects of albinism among Kuna people
- 9.20 - 9.40 **Aleksandra Kuzan** (PhD student)
*Research and Development Centre, Regional Specialized Hospital in Wrocław
Department of Medical Biochemistry, Wrocław Medical University* The content of osteopontin in the arteries and the degree of atherosclerosis and calcification
- 9.40 - 10.00 **Oliwia Patrzykąt**
University of Zielona Góra, Faculty of Biological Sciences The morphological analysis of the teeth in the case study of the preserved human cranium

Zoology

- 10.00 – 10.20 **Anna Dzierżyńska**
Nicolaus Copernicus University, Department of Invertebrate Zoology, Toruń The impact of a competitor *Dikerogammarus villosus* and predatory fish *Babka gymnotrachelus* on the habitat selection by an invasive gammarid *Pontogammarus robustoides*
- 10.20 – 10.40 **Justyna Kierat** (PhD student)
Institute of Environmental Sciences, Faculty of Biology and Earth Sciences, Jagiellonian University, Kraków Local mate competition in red mason bees (*Osmia rufa* L.)
- 10.40 – 11.10 Coffee Break (room 124)**
- 11.10 – 11.30 **Bartosz Kierończyk** (PhD student)
Poznań University of Life Sciences, Faculty of Animal Breeding and Biology, Department of Animal Nutrition and Feed Management Mineral nutrition of *Achatina fulica* using choice feeding experimental design
- 11.30 – 11.50 **Michał Mięsikowski** (PhD student),
Barbara Wojciechowska, Natalia Wojciechowska
Laboratory of Histology and Embryology of Vertebrates, Nicolaus Copernicus University, Toruń Effects of nitrate on the early development of bony fish - preliminary results
- 11.50 – 12.10 **Dawid Mika**
High School No. 3 by Stanisław Wyspiański in Jastrzębie-Zdrój Origin and early evolution of lampreys (Petromyzontiformes)
- 12.10 – 12.30 **Piotr Piliczewski** (PhD student)
Szczecin University, Faculty of Biology Hybridization among snakes of the genus *Lampropeltis* (Serpentes; Colubridae; Colubrinae)
- 12.30 – 12.50 **Monika Ratajczak**
University of Zielona Góra, Faculty of Mechanical Engineering, University of Zielona Góra, Faculty of Biological Sciences The mechanical properties of the spinal cord in a state of uniaxial tension

- 12.50 – 13.10 **Mateusz Rawski** (*PhD student*)
Poznań University of Life Sciences Faculty
of Animal Breeding and Biology,
Department of Animal Nutrition and Feed
Management
Veterinary issues in captive breeding of African
helmeted turtle (*Pelomedusa subrufa* Lacépède, 1788)
– case report
- 13.10 – 13.30 **Tomasz Rek** (*PhD student*)
Szczecin University, Faculty of Biology
Bird mortality on the roads running through the urban
area and beyond
- 13.30 – 13.50 **Edwin Sieredziński**
Faculty of Biology, University of Warsaw
Hybridization and animal phylogenetic development
mechanisms
- 13.50 – 14.10 **Łukasz Steczko**
Adam Mickiewicz University, Faculty of
Biology, Department of Animal Morphology,
Poznań
Evolutionary history of feather mites (Astigmata)
- 14.10 – 15.10 Lunch (room 124)**
- 15.20 – 15.40 **Ita Szczepańska**
University of Zielona Gora, Faculty of
Mechanical Engineering,
University of Zielona Gora, Faculty of
Biological Sciences
An innovative method for the treatment of hip
dysplasia in small dogs
- 15.40 – 16.00 **Paulina Szymańska**
Department of Animal Physiology, Faculty
of Biology and Environmental Protection,
Nicolaus Copernicus University, Toruń
Correlation between capacity for facultative non-
shivering thermogenesis (NST) and resting metabolic
rate of bank voles *Myodes* (= *Clethrionomys*)
glareolus selected for high metabolic rate

Ecology, Botany (room 219)

Ecology

- 9.00 - 9.20 **Michał Adamczyk**
Institute for Chemical Processing of Coal,
Zabrze
Utilization of carbon dioxide in the cultivation of
microalgae
- 9.20 - 9.40 **Wojciech Borzyszkowski** (*PhD student*)
The Forestry Student's Association, Faculty
of Forestry, Poznań University of Life
Sciences
Biometric analysis of *Tsuga canadensis* (Carr.) stand
on experimental site in Rogów Arboretum
- 9.40 - 10.00 **Anna Gdula, Marcin Dyderski**
The Forestry Student's Association, Faculty
of Forestry, Poznań University of Life
Sciences
How does plant cover affect population of *Osmunda*
regalis L. in the 'Baszków' nature reserve?
- 10.00 – 10.20 **Wojciech Borzyszkowski** (*PhD student*)
The Forestry Student's Association, Faculty
of Forestry, Poznań University of Life
Sciences
Methods for determination of biomass plants in the
forest ecosystem
- 10.20 – 10.40 **Aleksandra Jakubowska** (*PhD student*)
Adam Mickiewicz University, Faculty of
Biology, Poznań
Temporal features of bird song and the territorial
defense in the ortolan bunting *Emberiza hortulana*

- 10.40 – 11.00 **Anna Kowalska** (*PhD student*), **Luiza Dawidowicz**, **Marek Lorenc**
Department of Botany, Department of Horticulture and Landscape Architecture, University of Life Sciences, Poznań, Department of Horticulture and Landscape Architecture, University of Life Sciences, Poznań
- Wilda – garden project for residents
- 11.00 – 11.20 **Joanna Kowolik**
Jagiellonian University, Kraków
- Don't be fooled by scale insects
- 11.20 – 11.50 Coffee Break (room 124)**
- 11.50 – 12.10 **Weronika Kraczkowska**
Adam Mickiewicz University, Faculty of Biology, Institute of Environmental Biology, Department of Avian Biology and Ecology, Poznań
- Breeding ecology of the urban population of Fieldfare (*Turdus pilaris* L.) in Poznań
- 12.10 – 12.30 **Natalia Królikowska**
Faculty of Biology, Adam Mickiewicz University in Poznań
- Mechanisms of territories clustering in songbirds: Wood Warbler as a case study
- 12.30 – 12.50 **Katarzyna Myślicka** (*PhD student*)
University of Zielona Góra, Faculty of Biological Sciences
- Influence of climate on leaf morphological variation
- 12.50 – 13.10 **Sandra Wajchman** (*PhD student*)
Poznań University of Life Sciences, Faculty of Forestry
- The development of forest landscape in urban and suburban areas
- Botany**
- 13.10 – 13.30 **Agnieszka Rogula** (*PhD student*)
Medical University of Wrocław, Chair and Department of Pharmacognosy, Wrocław University of Environmental and Life Science Department of Fruit, Vegetable and Cereals Technology
- Estimation of agrimoniin and allagic acid content in different strawberry fructification phases
- 13.30 – 13.50 **Marcin Dyderski**, **Anna Gdula**
The Forestry Student's Association, Faculty of Forestry, Poznań University of Life Sciences
- Expansion of the alien woody plants in the Warta river valley in Poznań
- 13.50 – 14.10 **Ewelina Paluch** (*PhD student*)
Department of Plant Physiology, Faculty of Biology, Adam Mickiewicz University, Poznań
- Effect of drought stress on plasma membrane protein levels of mycorrhized maize root
- 14.10 – 15.10 Lunch (room 124)**
- 15.20 – 15.40 **Agnieszka Cabala**
Wrocław University Environmental and Life Sciences, The Faculty of Life Sciences and Technology
- The effect of a dose and a type of fertilization on decorative value of the selected ornamental perennial species
- 15.40 – 16.00 **Agnieszka Stelmasik**
Adam Mickiewicz University, Department of General Botany, Institute of Experimental Biology, Poznań
- The mystery of underground death in plants

Environmental Protection (room 321)

Environmental Protection

- 9.00 - 9.20 **Izabela Belz, Wojciech Borzyszkowski** (PhD student)
The Forestry Student's Association, Faculty of Forestry, Poznań University of Life Sciences
The image of The State Forests National Forest Holding in society
- 9.20 - 9.40 **Leszek Gersztyn** (PhD student)
Wrocław University of Environmental and Life Science, Institute of Soil Science and Environmental Protection
The influence of sewage sludge on growth and intake of heavy metals by perennial ryegrass (*Lolium Perenne* L.) from uncontaminated soils
- 9.40 - 10.00 **Bartłomiej Glina** (PhD student)
Institute of Soil Science and Environmental Protection, Wrocław University of Environmental and Life Sciences
Chemical composition of peat waters of selected peatland areas in the central part of Sudetes
- 10.00 – 10.30 Coffee Break (room 124)**
- 10.30 – 10.50 **Jakub Jakubowski** (PhD student),
Krzysztof Polowy (PhD student)
Poznań University of Life Sciences, Faculty of Forestry, Department of Forest Technology
Technical solutions for biomass procurement in the forest
- 10.50 – 11.10 **Maciej Jędrzejczak, Artur Skitek**
Faculty of Biology, Adam Mickiewicz University, Poznań
The regression of rare and protected plants species on the selected areas of strict protection in the Wielkopolska National Park: state of resources, cause of vanishing
- 11.10 – 11.30 **Agata Kiałka** (PhD student)
University of Wrocław
Specificity of butterfly-ant myrmecophilous relationships and population size in the Large Blue *Phengaris (=Maculinea)* (Lepidoptera: Lycaenidae) at Bystrzyca valley (Natura 2000 „Łęgi nad Bystrzycą” and „Dolina Widawy”)
- 11.30 – 11.50 **Krzysztof Kolenda, Mikołaj Kaczmarcki** (PhD student)
Department of Evolutionary Biology and Conservation of Vertebrates, University of Wrocław, Institute of Zoology, Poznań University of Life Science
Overexploitation of amphibian populations in the age of their global extinction
- 11.50 – 12.10 **Łukasz Mendyk** (PhD student)
Department of Soil Science and Landscape Management, Faculty of Earth Sciences, Nicolaus Copernicus University, Toruń
Properties of soil organic matter in soils derived from lake sediments in Sumowskie Lakes catchment
- 12.10 – 12.30 **Piotr Olszewski** (PhD student)
Faculty of Biology and Environment Protection, Chair of Ecology and Biogeography, Toruń
Preliminary research on potter wasp (Hymenoptera: Eumenidae) in valley areas of North Poland
- 12.30 – 12.50 **Paulina Anna Rutkowska** (PhD student)
Nicolaus Copernicus University, Faculty of Earth Science, Toruń
The rate of podzolization in the chronosequence of soils under pine timber forest on dunes in the Toruń Basin

- 12.50 – 13.10 **Agnieszka Sala** (*PhD student*)
University of Wrocław, Faculty of Biological Science, Department of Evolutionary Biology and Ecology, Division of Invertebrate Biology Bionomics, population structure and threats subpopulation of the Violet Cooper *Lycaena helle* (Denis et Schiffermüller, 1775) (Lepidoptera: Lycaenidae) on the Natura 2000 "Bierutów"
- 13.10 – 13.30 **Sebastian Salata**
Department of Biodiversity and Evolutionary Taxonomy University of Wrocław Results of myrmecological stocktaking of the Stołowe Mountains National Park fauna
- 13.30 – 13.50 **Emil Mariusz Szymański** (*PhD student*)
Wrocław University of Economics Faculty of Economics, Management and Tourism Meaning of protection of honey bees against mites *Varroa destructor*
- 13.50 – 14.10 **Adrian Wieruszewski**
University of Zielona Góra, Faculty of Biological Sciences The importance of allotments in the conservation of biodiversity
- 14.10 – 15.10 Lunch (room 124)**

Poster session (hall on the ground floor)

- 15.30 – 18.00 Presentations of posters by authors
 Botany
 Ecology
 Anthropology
 Zoology
- 20.00 – 24.00 Integration meeting (Minibrowar "Haust", Pl. Pocztowy 9, Zielona Góra)

Saturday 9.11.2013

- 9.30 – 11.30 City tour
- 12.00 – 13.30 Presentation of awards and closing ceremony (room 115)
- 13.30 Farewell treat