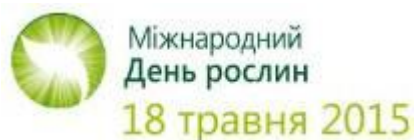


SUCCESS STORY OF THE THIRD FASCINATION OF PLANTS DAY IN UKRAINE



We are glad to report that in Ukraine many scientific and educational activities dedicated to the Third International “Fascination of Plants Day” (FoPD) were held on **May 3–30, 2015**. Visitors were invited to open lectures, presentations and tours organized by leading experts and enthusiasts in the field of plant biology as well as plant lovers and inspired artists. This year some FoPD events in Ukraine were cross-linked with **free** open lectures, presentations, excursions and other scientific and educational events organized by young scientists of the National Academy of Sciences of Ukraine “**Days of Science Spring**” (May 16–23) and **International Museum Day** (May 18). Research institutions, universities, botanical gardens, natural science museums and national parks were open for anybody sharing an exciting educational and informative activity for the whole family about various aspects of plant life. Experiments’ demonstrations using modern methods of biological research, nature trips, greenhouse tours, competitions, lectures, workshops, quizzes, biking tours, photo contests, “plant art” exhibitions, fairs and other activities were organized in many Ukrainian cities (Kyiv, Cherkassy, Kharkiv, Lviv, and Odessa) as well as Nature Parks in Ivano-Frankivsk, Kherson, Sumy, Mykolayiv, Cherkassy, Rivne and other regions. Donetsk and Lugansk regions, as well as the Autonomous Republic Crimea were represented only by plant art and photo exhibitions in Kyiv because of the aggressive politics of the Russian Federation and their temporary artificial isolation.

Prof. Yaroslav B. Blume (National FoPD Coordinator, Ukraine Representative in EPSO, Director of the Institute of Food Biotechnology and Genomics (IFBG) of National Academy of Sciences (NAS) of Ukraine, Full Member of NAS of Ukraine) and Dr. Yuliya A. Krasnylenko (Local FoPD coordinator and supporting scientist, Head of Young Scientists Council of IFBG, NAS of Ukraine) coordinated 127 events in 38 institutions throughout Ukraine. This effort resulted in Ukraine being awarded second place in the world for the number and extent of the organized events this year. The organisers greatly appreciate the efforts of every participant!



“Novel history of FoPD in Ukraine”: Many nature-honoring festivals have been celebrated in Ukraine for years such as: traditional religious events – Green May Days, Holy Trinity, Ivana Kupayla, Herbalist’s Day, and more – plus many newly-appearing professional holidays – Earth Day, Biodiversity Protection Week, etc. In turn, Fascination of Plants Day (FoPD) could not be excluded: Ukraine adopted it in May 2012 by the efforts of Ukrainian EPSO cluster, headed by the Institute IFBG NAS of Ukraine. This cluster was established earlier under the initiative of Prof. Blume on the basis of four leading institutions from the National Academy of Sciences (IFBG, M.G. Khlododny Institute of Botany, Institute of Plant Physiology and Genetics, M.M. Gryshko National Botanical Garden) and Taras Shevchenko Kyiv National University (Educational and Scientific Centre “Institute of Biology”).

RESEARCH CENTERS, BOTANICAL GARDENS AND MUSEUMS



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Institute of Food Biotechnology and Genomics, NAS of Ukraine, Kyiv



This leading institution from FoPD-Ukraine cluster is represented by the National FoPD coordinator in Ukraine, Prof. Yaroslav Blume and supporting scientist Dr. Yuliya Krasnylenko, who congratulated participants and guests of the FoPD official opening on May 18th and continued through May 19th. The **cutting-edge lectures** were presented: "Biotechnology: the ways for development and the role in national food security" (Prof. Dr. Yaroslav Blume), "Advances in synthetic biology" (Prof. Dr. Alla Yemets), "Plant biotechnology: future prospects" [Dr. Stanislav Isayenkov, <https://www.youtube.com/watch?v=LpSSJVhdudfQ> ("Intellect TV")], "Strategies of plant reproduction" (Dr. Sci. Elena Kravets), "Foreign gene detection in plant material and food by polymerase chain reaction" [Dr. Yaroslav Pirko, <https://www.youtube.com/watch?v=wUWQlfsOOgA> ("Intellect TV")], "Nanobiotechnology: current state and future prospects for plant genetic engineering" [Olga Burlaka, <https://www.youtube.com/watch?v=ToSa19m7wQ8> ("Intellect TV")], "Bioinformatics as a tool of plant genome and proteome research" [Dariya Samofalova, <https://www.youtube.com/watch?v=Mdy7NMHtfU> ("Intellect TV")], as well as brilliant workshop "From Whole-Genome Sequencing to Protein Analysis" [Dariya Samofalova, <https://www.youtube.com/watch?v=e1tGfiMG0-w> ("Intellect TV")]. Young attendees of the IFBG Open Day events had the opportunity to participate in "In vitro culture in plant genetic engineering" workshop by Anastasia Buziashvili and discuss hot topics of plant molecular biotechnology such as existing ways and new technologies for gene transfer, successful introduction of "green inventions", benefits of genetically modified plants compared to chemically-treated ones, the potential of transgenic plants for bio-fuel production, and others. Dr. Dmytro Lytvyn and Vera Fedyna presented the workshop "Western blot analysis of plant proteins: tubulins" that allowed visitors to understand the basic method of protein research (proteomics) and witness the process from sample preparation to the observation of the protein stains (dots and stripes) on special film.



Photos: Oleg Bayer, Anastasia Buziashvili, Yuliya Krasylenko, Dmytro Lytvyn, Dariya Samofalova



Photos from the Internet representing the main lectures and workshops topics

Common myths about the genetically modified organisms were debunked during "Isolation and Analysis of Plasmid DNA" workshop presented by PhD student Olena Krasnopyorova, who helped visitors to observe and treat DNA as bio-organic molecules. "From Whole-Genome Sequencing to Protein Analysis", the workshop by PhD student Dariya Samofalova shed some light on the *in silico* approach, 3D reconstruction and modeling of protein interactions with different compounds. During microscopy workshop "20 nm Inside Plant Cell" by Dr. Yuliya Krasylenko visitors got acquainted with the principles of laser scanning confocal microscopy while examining the surface of some dried plants using the USB microscope and preparing their own temporary slides from fresh leaves, petals, tobacco suspension culture BY-2 grown in aseptic conditions and exploring the samples using light microscopy. The workshop has been kindly supplemented by the demomicroscopy sessions by Dr. Olena Kravets and PhD students Inna Goriunova and Svitlana Plohovska, who have also prepared the biological quiz "This Amazing Microcosm". The representative of the OPTEK company, Dr. Volodymyr Gridasov, demonstrated basic *Carl Zeiss* stereo- and light microscopes and shared the principles of their work.

On May 17, in the Hall of M.G. Kholodny Institute of Botany, NAS Ukraine (Kyiv) as the joint event to “Days of Science. Spring” young scientists from NAS organized many thrilling educational presentations dedicated to various aspects of plants, fungi, mosses and lichens life, namely: “*In vitro* Culture: from Cell to Plant”(PhD students Ilya Bulavin and Ivan Zhupanov), “Spring Mushrooms” (Dr. Maria Zykova and PhD student Ghaleb Al Maali), “Amazing Strangers Among Us. World of Fungi”(Dr. Olexandra Ivanenko), “Secrets of the Plant Surfaces” (Dr. Olena Peregrym and Dr. Igor Olshanskyi), “Lichens as Environmental Indicators” (Prof. Sergiy Kondratyuk, Alla Litovynska, PhD student Nadiya Kapets and Nina Shershova), “Mosses in Nature and in Human Life” (Dr. Vitaliy Virchenko and PhD student Alexiy Barsukov).



Photos: Olena Godlevska, Eugene Pol’ovyy, Natalia Tsukanova

Presentations were followed up with the lecture of Prof., Dr. Sci Elizabeth Kordium (Corresponding Member of NAS of Ukraine) <https://www.youtube.com/watch?v=OyiseR7NW68> (Intelect TV)], prominent Ukrainian scientist in the field of plant cell and developmental biology, organizer of many space experiments including those guided by NASA. She gathered many people presenting an open lecture “Plants in Space” dedicated to plants behavior under microgravity. Lectures “Mysterious Antarctic flora in the Context of Natural History of the Frozen Continent” by Dr. Ivan Parnikoza and “Herbaria of Ukraine” by Dr. Natalya Shiyan attracted many visitors from and brought up vivid discussions. The inimitable plant fest atmosphere has been aggravated by the exhibition of plant photos of “National Geographic Ukraine” photographers Mykhailo Bogomaz and Natalia Schevchenko, art-herbariums of the Crimean plants “Flora Taurica” by Dr. Yuliya Krasylenko as well as the best photos of winners, “special jury” and “audience honor” awards of “Plant Art and Photography Contest-FoPD in Ukraine”. Tetyana Karpiuk volunteered FoPD media contacts and invited many mass-media representatives to witness and highlight FoPD events.



Photos: Olena Godlevska, Eugene Pol’ovyy, Natalia Tsukanova

Here is the feedback in field-notes style of Dr. Igor Olshanskyi, Head of the Young Scientists Council of the M.G. Kholodny Institute of Botany of NASU “May 17, 2015. Sunday. Weekend. The doors of Institute of Botany were opened. That day we organized many activities for the FoPD and “Days of Science. Spring”. So many visitors came! Children, students, seniors – the audience was very diverse. Exhibitions, demonstrations

and stories aroused great interest. Visitors were able to learn about fungi, mosses, lichens, flowering plants, plants behaviour in space, the biodiversity of the Antarctic flora, and to visit the richest National Herbarium of Ukraine (KW). Everyone could look through a microscope lense, observe plant surfaces with USB-microscope, as well as to touch, smell and identify spring mushrooms and also attend the exhibition of beautiful plant pictures from the farthest places of Ukraine. To summarise, the event was interesting, inspiring, both popular and scientific. It was about the plants, but not only the plants!”



M.M. Grishko National Botanical Garden, NAS of Ukraine, Kyiv



The Garden greeted visitors with the exiting lectures: "New World Garden *Dahlia* Selection and its Agricultural Technology"(Dr. Anatoliy Doroshenko), "Begonia: diversity and cultivation" (Dr. Iana Byelayeva), "Plant Dyes: Traditional and Modern Use" [Dr. Olena Andruschenko, <https://www.youtube.com/watch?v=qRL2KLEYTvs> (“Intelect TV”), with the implementation in practice as plant-dyed Easter egg by Sofia Andrushenko) with the following walk "Observation and Identification of Harmful And Useful Garden Insects, Unusual Methods of Pest Bio-control and Attraction of Beneficial Insects (Pollinators and Parasitoid Wasps)” by Dr. Victor Fursov and Dr. Vitaliy Nazarenko) https://www.youtube.com/watch?v=eC6_9i1zqUY&feature=youtu.be.



Photos: Olena Andushenko, official botanical garden site

20 травня 2015 року

20 травня учні 5-ого і 6-ого класі відвідали Національний ботанічний сад імені М.М. Гришка з нагоди святкування Дня рослин. Відвідали лекцію про різноманіття та розмноження жоржин, яку провів науковий співробітник інституту. Діти познайомилися із різноманіттям тропічних рослин у новій 32-метровій оранжереї. Побачили як ростуть банани, гранати та інжир. Реліктові рослини, що існували ще за часів динозаврів особливо вражали наших учнів. Особливий сюрприз чекав на відвідувачів виставки Plant Art and Photography Contest -бажаючи одержати нагадку чарівні візерунки кною від майстрині Марії Кузнєцової. Гості збагатились знаннями про біологію рослин та приємними враженнями від екскурсій.

During May 15–24, visitors of the lilac flowering were also welcomed to attend the exhibition of the best of "Plant Art and Photography Contest". Dr. Olena Andruschenko kindly helped to set up photographs of the participants throughout the Ukraine as well phyto-embroidery and bottles decoupage (Dr. Anna Kuzemko), botanical embroidery (Dr. Anna Boyko), “Pine Top Craft”: ferns and lings in epoxide resin “Laconic” collection (artist Polina Zabizhko), plant printouts on clay (Dr. Tatiana Fitsailo and Yuliya Mala), watercolors (artist Olga

Morgun), “Flora Taurica” art-herbariums (Dr. Yuliya Krasylenko). Prof. Dr.Sci., Corresponding member of NAS of Ukraine Sergiy Mosiakin commented and presented the Botanical exhibition from the plant biodiversity point of view for the short movie from “Intellect TV” (Alexey Smirnov and Kristina Kernitska, Minor Academy of Sciences Channel): <https://www.youtube.com/watch?v=GaV-4I-eAiI>



Photos: Olga Morgun, Olena Andushenko, Andrii Mosyakin, Alexey Smirnov, Kristina Kernitska



O.V. Fomin Botanical Garden, Kyiv



On May 16, O.V. Fomin Botanical Garden, Educational and Scientific Center "Institute of Biology", Taras Shevchenko National University of Kyiv, opened the doors for visitors and organized scientific excursions to Botanical Garden greenhouses with succulents, tropical and subtropical plants as well as rare and medicinal plant plots. Workshop “Plant Herbarisation” by Dr. Mykyta Peregrym gathered many plant-lovers, who would like to study the proper approach to plant collections: identification, drying, mounting and preservation. All participants received official certificates. Dr. Anastasia Golubenko's workshop, "Orchid Seed Breeding and *in vitro* Propagation", attracted many keen plant breeders.



Photos: Mykyta Peregrym and colleagues

Photo exhibition of plants and landscapes of Donetsk and Lugansk regions of Ukraine that, at the moment, are destroyed by the military intervention of Russian Federation, has been set at the O.V. Fomin Botanical Garden for the summer 2015.



Photos: Mykyta Peregrym, Alexander Bronskov, Vitaliya Kluev, Ganna Boiko, Galina Gouz

"Flower Power" Fair , Kyiv



O.V. Fomin Botanical Garden kindly hosted the free, open-air educational and entertaining event “Flower Power” <https://www.facebook.com/petiole.co?fref=photo>. Various activity zones were represented in “Flower Power” including:

Plant Science Zone: scientific project “Petiole” <https://www.facebook.com/petiole.co?fref=photo>, excursions to Botanical Garden green houses with succulents, tropical and subtropical plants, as well as, rare and medicinal plant plots, workshops “Plant Herbarisation” (Dr. Mykyta Peregrym), “Orchid Seed Breeding and *in vitro* Propagation” (Dr. Anastasia Holubenko).

Art Alley: “Pine Top Craft”: ferns and lings in epoxide resin “Laconic” collection (artist Polina Zabizhko), “January Fox” (Nataliya and Eugenia Kozlovski, Sergiy Legkiy), plant printouts on clay (Dr. Tatiana Fitsailo and Yuliya Mala), jewelry (Valeria Bruevich, Oxana Kolokolova), epoxide resin-embedded flowers and lichens (Anna Shamalo), wooden flutes (Dr. Andrii Mosyakin), art-herbariums (Dr. Yuliya Krasylenko), oshibana (Olena Okhnik and Tetyana Berdnyk), pictures from flowers (Valentyna Grebin’), decoupage (Svitlana Kravchuk), tissue dolls “lyalka-motanka” (Olesya Gronska), natural wax candles and glass decorations (Yana Nogovitsyna), amber decorations (Olga Karvatska), hand-made ceramics (Alisa-Anastasia Slusar), embroidery (Marina Davydova), “Satin Flower Studio” (Olena Vladyko), flower belts and crones (Oxana Borsuk).

Plant Zone: seedlings and flowers (O.V. Fomin Botanical Garden nursery), succulents in artistic pots (“Roslynka”, Anna Paschenko)

Health and Beauty Zone: organic cosmetics “Mavchyn Darunok” (Dr. Olga Kuzmanenko), “Secrets of Long Hair Treatment by Herbs” (“Charivnytsya” – “Fairy” Anna Usova), natural cosmetics “Herbal Spa” (Inna Didenko), herbs collections (Olga Yaroshko), natural soap (Kostyantyn Chorny, Eugene Rudenko).

Food Zone: “Vega Food”, green cocktails and organic tooth powder (Roman Danilenko), “Fruroll” (Olena Vladyko), herbal tea “Konotopska Vidma” (Inna Braznik), “Free Karma” (vegan food), “Merry Cookies” (Yuliya Diduk).

Entertainment Zone: quests for kids (“Klub Korysnogo Dozvillya” – “Creative Extracurricular Activity Club”, Anna Usova, Dmitriy Usov, Tatyana Sanina), flower books presentation from the library “Youth Guard”, exhibition of the best works of winners, “special jury” and “audience honor” awards of “Plant Art and Photography Contest-FoPD in Ukraine”, plant photos of “National Geographic-Ukraine” photographers Mykhailo Bogomaz and Nataliia Schevchenko, origami and ikebana (Japanese Cultural Centre, Kyiv) and “Family Tree of Life” egg painting workshop (Olesya Tokarska), mehendi (Eugenia Merzievskaya, Olena Voronetska), workshop “Plant Grafting” (Larysa Gordzievskaya).





Photos: Polina Zabizhko, Eugene Pol'ovij

Artist Vitaliy Bugara kindly allowed using his mandala as the emblem of the fest, while the primary design was developed by Eugenia Chugyi. The organizers appreciate the Director of the Botanical Garden, Dr. Olexander Senchylo and PR manager Olena Levytska, who input many efforts and soul into the project.

National Museum of Natural History NAS of Ukraine



I.I. Schmalhausen Institute of Zoology, NAS Ukraine



Institute for Evolutionary Ecology, NAS of Ukraine



On May 17 scientific and educational activities entitled "Days of Science. Spring-2015" were held at and by the National Academy of Sciences (NAS) of Ukraine. This was a project for science popularization organized by young scientists from the NAS of Ukraine. This year's event took place in conjunction with the Fascination of Plants Day (organized by the European Plant Science Organisation – EPSO) in Ukraine as well as International Museum Day (under the umbrella of the International Council of Museums – ICOM). Visitors of the event "Days of science. Spring-2015" had the opportunity to attend interesting popular science lectures and exciting demonstrations, which took place in an antique mansion of the National Museum of Natural History in the heart of Kyiv. Having been conducted by young zoologists and lead researchers of the National Museum, Institute for Evolutionary Ecology and I.I. Schmalhausen Institute of Zoology of NAS of Ukraine, many of them provoked a lively interest both in children and in adults. Biotechnology students from the Department of Biotechnology of National Aviation University held demonstrations and introduced everyone to the principles of the cultivation of microorganisms, techniques for the isolation of genetic material from bacteria, plant diseases in the urban environment and others. More than 5000 people visited the Museum during the events of May 17. I.I. Schmalhausen Institute hosted two wonderful photo exhibitions: "Animal World of

Ukraine" and "Wild Animals of the Exclusion Zone" (150 images in total) that had represented the variety of both large and small animals – the inhabitants of our country.

I.I. Schmalhausen Institute of Zoology, NAS Ukraine (Kyiv) opened the doors for all who were interested in animals' life and presented a number of inspiring, clarifying, cautionary and entertaining, but at the same time, cognitive lectures: "Are spiders useful or dangerous?" (Dr. Kostiantyn V. Yevtushenko), (<https://www.youtube.com/watch?v=GrWArLvr7pY>), "Parasites Hidden in City Plants – 'Look at the Danger' Eyes!" (Dr. Yuliya M. Didyk, Dr. Igor V. Nebogatkin), "Caterpillars: From Lilliputians to Giants" (Dr. Irina Dolinskaya), "Insect Pollinators on Ficus trees: Symbiosis or Death?" (Dr. Victor Fursov) and "Ants and Plants: An Amazing Interaction" (Dr. Sci. Olexander Radchenko). The non-government organization, "The United help to Ukraine", sponsored the photo exhibitions "Wild Animals of the Exclusion Zone" (Dr. Denis Vishnevskiy) and "Animal World of Ukraine" (Dr. Yuliya M. Didyk).



Photos: Olena Godlevska, Natalia Atamas, Natalia Tsukanova

In turn, the "Botanical Museum" of the National Museum of Natural History NAS of Ukraine (Kyiv), organized several plant-related activities in frame of FoPD and "Days of Science. Spring": tours "Plants on the Verge of Extinction: the Red Book of Ukraine", "Impressive Diversity of Plant Kingdom" (Dr. Oleksiy Kovalenko) and workshop "Making a Herbarium" (Dr. Oleksiy Kovalenko). The "Paleontology Museum" of National Museum hosted lectures: "Amphibians Voices " (Dr. Anastasia Maljuk), "Plants in a Beaver's Life" (Dr. Alina Mishta), presentation "Interesting Asian invasive insects on plants in Kyiv (exemplified by the ladybird beetle, *Harmonia axyridis*)" (Dr. Oksana Nekrasova and Dr. Volodymyr Tytar), visualized talk "Birds of city parks and gardens" (Dr. Hennady Fesenko), workshop "Paleontological Excavations" (Dr. Volodymyr Gritsenko), presentation "Making tools of primitive people – a masterclass for beginners" and tour "History of Museum" (Ms. Sci. Olexander Kovalchuk), museum tour "The History of the Museum" (Dr. Svyatoslav Pogrebnyak).



Photos: 1) Demonstration in the Hall of the National Museum of Natural History. Photo – O. Godlevska; 2) Demonstrations of the Department of Invertebrate Fauna and Systematics (from right to left: Dr. Sci. Vitaliy V. Anistratenko, Dr. Olga Yu. Anistratenko, Dr. Igor O. Balashov, Dr. Yuliya P. Kanana). Photo – T. Pushkar. 3) Group photo of the participants. Photo – O. Godlevska.

Plants and animals are interrelated, and zoologists supported FoPD events to emphasize this inextricable connection. Thus, the “Geology Museum” of the National Museum invited to the workshop “Mineralogy” including the plant fossils presentations by Dr. Sci. Kateryna Derevska and many hot-topic lectures “Ixodes ticks – parasites in the city” (Dr. Yuliya M. Didyk), “Mites With Armor and Wings” (Olexandra S. Shevchenko), “Why Plants are Afraid of Mites?” (Dr. Olga V. Zhovnerchuk), “Invisible Inhabitants of Lakes and Rivers, or Who Lives in Leaf Litter?” (Dr. Yuliia Kanana), “Butterfly-winged flies” (Severyn V. Korneyev), “Rove beetles – Tiny Predators Living in Leaf Litter” (Robert Kryvosheev), “Mollusks – Slow-Life Inhabitants of the Earth” (Dr.Sci. Vitaliy V. Anistratenko), the “Fascinating Life of Whales” (Dr. Oxana Savenko), “Ants: Unknown World” (Dr. Stanislav Stukalyuk), “Subtle Inhabitants of Lakes and Rivers” (Dr. Larysa Samchishyn), “Pollen – Basic Food Allergen or the Key to the Past?” (Dr. Natalya Chumak), “Bees That Do Not Produce Honey” (Ganna Gonchar), and “Diversity of Higher Aquatic Plants in Large Cities” (Maryana Prokopuk, Yuliya Pohorelova). In addition, lecture “Poplar and Chestnut Diseases at Urban Plantations” and “How to Use Microscopic Fungi in Biotechnology?” and workshop “DNA isolation from bacteria” were delivered by Anna Drazhnikova.



Photos from the event: 1) Organizers of the "Science Days. Spring-2015" and the management of the Institute of Zoology (from right to left: Corresponding Member of NAS of Ukraine, Dr. Sci., Prof. I. A. Akimov – Director of the Institute, Dr. Hab. V. O. Kharchenko – Scientific Director, Dr. Yu. M. Didyk, Dr. N. S. Atamas). Photo – T. Pushkar. 2) Assembly hall of the Institute of Zoology, lecture of Dr. Yulia M. Didyk and Dr. Igor V. Nebohatkin "What parasites are hiding in city plants – look at the danger's eyes." Photo – O. Godlevska. 3) Photo exhibition at the Institute of Zoology. Photo – O. Godlevska. 4) Volunteers of the Days of Science. Photo – O. Godlevska.

In general, the events of "Days of Science. Spring-2015" aroused great curiosity among residents and guests of Kyiv; they were also attended by biologists from other scientific institutions of Ukraine. Active assistance in the organization of the event has been provided by volunteers from Borys Grinchenko Kyiv University (students of Prof. I.D. Omeri) and by caring assistants, who responded to the request of the organizers on the Internet.

Report: Dr.Natalia Atamas



FoPD in IMBG was combined with the celebration of the "Days of Science. Spring-2015". In these occasion many exciting events were held. Parents with their children and students had the opportunity to try and to master the everyday scientific techniques. PhD students Maryna Vivcharyk and Natalia Melnichuk demonstrated the isolation of DNA from a banana and an apple in almost "home" conditions.



Photos: Olexander Skorokhod, Igor Kravchuk

Moreover, techniques of DNA fragments separation by their length using electrophoresis in polyacrylamide gel were also presented by PhD student Oleg Palyvoda. During the demonstration "Under the microscopes' objective" by junior researcher Igor Kravchuk and PhD student Daria Navrotska all students were able to participate in preparations of fixed human blood cells as well as mouse and rat cell lines, bacteria and micro-fungi for the observation through a microscope lense. In addition, visitors were encouraged to prepare their own temporary slides of fixed plan roots both intact and challenged by adverse environmental conditions. Next, kids were very happy to see a genetically modified mouse that emitted dim green light after the excitation by UV exposure and get some knowledge about genetically modified organisms with master student Yaroslav Yasinsky. The young visitors also had the opportunity to attend the lecture "The plant world of the Antarctic continent" from Dr. Ivan Parnikoza and to understand some mechanisms of adapaion of the Antarctic flora to life in harsh conditions. Owing to the efforts of Dr. Dmitry Jakubowski from Boholubov Institute of Theoretical Physics, NAS of Ukraine, our participants learned about the benefits of X-ray astronomy for the studies of space objects with the extreme characteristics unavailable for observation in terrestrial laboratories from the lecture "The X-ray window into the mysteries of the Universe". Young attendees and their parents had a lot of fun participating in the "Plant Origami" workshop, where they hand-made their own artworks from colorful paper.

At the end of celebration, visitors enjoyed short movies from Dr. Oleksandr Skorokhod, Dmitriy Gerasimchyk and Daria Navrotska about scientific modeling of DNA replication, protein bio-synthesis and other cell processes, the emergence and development of plant from seed, and the plants life in extreme conditions. "We hope that our efforts will leave only positive memories for the attendees and turn the attention of more people to the Ukrainian science and science in general", summarized the expectations of the events organizers in IMBG Dr. Olexandr Schorochod, the Head of the Young Council of the Institute. It has to be mentioned as well that the perfect interactive web-site of the FoPD cross-event in Ukraine "Days of Science. Spring" <http://dni-nauky.in.ua/> was developed just in time by junior researcher Igor Kravchuk (made in "Sam Sklepav").

Report: Dr. Oleksandr Skorokhod, Daria Navrotska



State Museum of Natural History NAS of Ukraine (Lviv)



May 16–17 were the days of four different celebration of science events in State Museum of Natural History of NAS of Ukraine, namely the Science Days, Fascination of Plants Day, International Museum Day and the European Night of Museums. Visitors were given the opportunity to do research alongside the scientists from the Museum during botanical, paleontological, entomological, and soil ecology workshops. They learnt how to identify animals by skulls, work with the herbarium press, what do "soil studies" mean, how petrification happens and who the entomologists are. At the Scientific loft there were discussions of travels, animal and plant life of our region and far away. The youngest visitors adorned the sakura trees in the yard with flowers and watched Ukrainian cartoon pictures about plants, acquiring new knowledge of them. The children also visited the exhibitions, danced and listened to lullabies from the band "Three steps in the Night" ("Try kroky v nich") at the closure of the events.



Photos: Kateryna Lavruk

Botanical Garden of Ivan Franko National University of Lviv



On the May 17 and 31 numerous educational activities – lectures and presentations entitled “Human and Garden–2015” were held at the Botanical Garden of Ivan Franko National University of Lviv. The Botanical Garden opened the door for all, who were interested in colorful spring plants and wanted to feel themselves closer to nature. Thousand of visitors had the opportunity to attend several interesting events: educational botanical tours "Rhododendrons: Garden Rose Glory" (Dr. Galyna Tymchyshyn) and "Rainbow Palette: Iris Collection in Botanical Garden" (Dr. Andriy Prokopiv and Jadwiga Fedorovska). Parents with their children, pupils and students, who came to the garden, had the opportunity to gain some new knowledge about the plant diversity of the Botanical garden, different systematic groups and collections. Many keen plant lovers could receive handy information about breeding, planting and biology of numerous plants. This is not the first time the Botanical Garden opened the door for the public. It has been a good tradition for many years to organize the different targeted activities “Human and Garden” by our institution. The Garden invites numerous visitors in order to show them the most valuable treasures of our collections and spread our knowledge about the World of plants.



Report and photos: Lubov Borsukiewiz



Taras Shevchenko National University of Kyiv Educational and Scientific Center "Institute of Biology" Department of Plant Physiology and Ecology, Organization "Women in Science"



Within the framework of the 3^d FoPD in Ukraine many scientific and educational activities in the Educational and Scientific Centre "Institute of Biology" at the Departments of Plant Physiology and Ecology were held on May 22, 2015 to promote knowledge about the latest achievements and prospects of plant biology among students, researchers and teachers.



The event began with a presentation of Prof., Dr. Sci. Nataliya Taran, the Head of the Department, who emphasized the concerns of international scientific community as for the insufficient number of qualified phytophysiolgists, or so called “plant biologists”. “The planet needs more plant scientists”: this statement was considered in almost all international forums dedicated to various problems of the plant world. "The Scientist" journal (Vol. 10, 2014), in particular, presented statistics that indicated stagnation in plant biology training during past three decades. However, it has been noted that current plant physiology is an integrative field of science applying numerous classical scientific and novel methodological approaches to plant research. Recently, such fields as molecular biology, genetics, biochemistry, and plant physiology are developing rapidly allowing researchers to study their objects in higher precision and to further understanding of the mechanisms of protein synthesis, photons processing during photosynthesis, genetic recombination and others. Plant physiology is a fundamental science addressing many applied topics aimed to solve the Earth’s global issues including the increase of crop productivity and environmental protection.

It has been established that the world population will treble during 1950 – 2050 from 2.5 to 9.6 billion inhabitants. Therefore, one of the main tasks of plant physiology as the applied science is to increase food production in 60% over the next 40 years. Meanwhile, energy costs will increase in 56% that implies the development and the use of “bioenergy” – plant-derived renewable energy sources. However, 80% decrease in plant productivity is forecasted by the end of the century because of global climate change. Deterioration of the environmental and climatic conditions in the world emphasize the problems of adaptation and plant stress physiology as the most important trends in modern phytophysiology focusing on the the mechanisms of plant adaptation to adverse environmental conditions. Many aspects of up-to-date plant physiology were taken into account in the educational process and training at the Department of Plant Physiology and Ecology and highlighted by Master students Julia Pysmenna and Yana Abramovych in presentation “The Planet Needs More Plant Scientists”.



The presentation "Plants in Taras Shevchenko poetry", illustrating beautiful and unique nature of Ukraine in verses and paintings of Taras Shevchenko, was artistically made by the first-year Ms.Sci. Kateryna Lagodzynska. Taras Shevchenko practiced art as a spiritual perception of reality and believed that the artist reflects the nature and realistically transforms it through art. Painitings and verses of Taras Schevchenko represent about 80 species of the Ukrainian flora such as willow, oak, maple, poplar, feather-grass, birthwort, arrowwood, periwinkle and others. Old mighty trees are depicted by Shevchenko in such a manner that it seems easy to feel the eternal idea of life – a struggle and competition. The poet’s most favorite tree was willow mentioned in various verses over 40 times overall. Much attention is also paid to arrowwood (*Viburnum* sp.), the symbol of faithful love, virgin beauty, the inevitability of fate and serenity of nature. "Plant" motives of Shevchenko were also visualized on the posters (presented by the engineer of the Department Maria

Kovalenko) with the original handwritings of Taras Shevchenko on the back of the plants – willow (*Salix*), periwinkle (*Vinca*), poplar (*Populus*), arrow wood (*Viburnum*), mentioned by the poet in his masterpieces.

From the works of Ukrainian genius Taras Shevchenko the participants of 3^d FoPD proceeded directly to recent scientific problems. The project "Support of Ukrainian Diaspora in Plant Biology Promotion for Students and Scientific Community" highlighted the participation of the Ukrainian diaspora and scientists from Taras Shevchenko National University of Kyiv and Palladin Institute of Biochemistry, NAS of Ukraine. Scientists have translated the textbooks of Nelson D.L., Cox MM "Lehninger Principles of Biochemistry" (W.H. Freeman and Company. – New York, 2005. – 1119 p.) and sections of the textbook "Biochemistry and Molecular Biology of Plants" (B.Buchanan, W.Gruissem, R.Jones, Eds. // Publication of American Society of Plant Physiologists. – Berkeley, California, 2000. – 1400 p.) into Ukrainian. The first Ukrainian edition of the most popular modern textbook of biochemistry by David Nelson and Michael Cox, an updated version of the book by famous American scientist and teacher Albert L. Lehninger was initiated by Prof. Zinoviy Vatamanyuk (Lviv National Ivan Franko University) and Prof., Dr. Sci. Vira Troyan (National University of "Kyiv-Mohyla Academy" and Chairman of the NGO "Women in Science"). Significant fundings for licenses and translations was provided by the philanthropist Gregory Malinowski. The projects was also supported by Prof. Dr. Vladimir Bandera from the Ukrainian Federation of America as well as the family of M. and O.Vatamanyuk. Scientific editing of the translation was performed by a group from Palladin Institute of Biochemistry of the National Academy of Sciences of Ukraine consisting of Prof., Full Member of NAS of Ukraine Sergiy Komisarenko, Corresponding member of NAS of Ukraine Sergiy Kosterin and Dr. Mykola Velykiy, Lyudmyla Drobot, Olesandr Minchenko and Olga Matyshevska. Starting from the 70s the manuals of these authors are being widely used to train specialists at the universities of biological, medical, pharmaceutical and agricultural profiles in many countries. The creative team of translators did their best to help the students, teachers and scientists to process and use novel scientific data and ensure the use of well-established biological terminology.

Practical plant biology skills visitors gained during master class "Microclonal plant propagation" (Dr. O.O.Panyuta and 4th year students Anastasia Revutska and Anastasia Zinchenko). Microclonal reproduction is a modern method of asexual plant micropropagation *in vitro*. The obtained plants are genetically identical to their original parental forms, what helps to save genetically uniform planting material. Students learned about the different methods of vegetative propagation of tobacco plants (*Nicotiana tabacum* L.) *in vitro*: activation of the axillary meristems, obtaining of plant regenerants from leaf discs and induction of rhizogenesis in this type of explants.



Other participants were acquainted with the art of floral couturier Dr. Alla Smolya. During workshop dedicated to the creation of live flower decorations everybody received beautiful and exotic flowerchaplets, boutonnieres, and hairpins.



Our holiday ended by the summary of the contest results of creative works under the title "The Plants and the City". First place was given to the 4th year student Anastasia Revutska for acrylic painting "The 900-year-old Grunewald Oak". The oak grows in "October" sanatorium in Koncha-Zaspa, Kyiv region. In 2010, Grunewald oak became the first tree to be awarded the title "National Tree of Ukraine" as a result of the

eponymous contest from the State Service for Protected Areas of Ukraine and Kyiv Ecological and Cultural Center in the category "aesthetically valuable tree". Participants met this majestic tree during one of the workshops of plant physiology students last autumn. The scientific observations and artistic impressions were expressed by student in the annotations to the submitted work for the contest: "The oak tree is very thick, rather high and has an unusual trunk shape. Despite its old age, diseases, destroyed wood inside the trunk, multiple hollows and concrete road constructed over its roots, it continues to grow and is still covered with healthy green leaves. This oak has a truly indomitable desire to live. So I decided to depict it on canvas (The painting from nature, acrylic, 40x50 cm). This oak inspired me so much that the whole picture was completed in only 3 hours. We should always remember and protect such unique plants! "



Moreover, the photographs of students Pavlo Shvydun, Darya Kononenko, Anastasia Zinchenko, Vladimir Kotlyar, Yana Abramovych, and Yuliya Pysmenna were awarded as well. Generally, during the 3^d FoPD held at Taras Shevchenko National University of Kyiv participants felt a lot of inspiration and interest to plant physiology.

Report and photos: Prof., Dr. Sci. Nataliya Taran
Translated by Andrii Mosyakin

National University of "Kyiv-Mohyla Academy", Student Biological Society



During May 21 –22 the students from "Students Biological Society" organised the excursion to Kyiv down town "Spring Podyl" (Victoria Vasil'chenko), outdoor activity "Planting flowering plants in *Alma Mater*" (Tayisia Kozak) and workshop "Flowers Decorations" (Darya Vorobey).

V.N. Karazin Kharkiv National University



This year the Department of Physiology and Biochemistry of Plants and Microorganisms V.N Karazin Kharkiv National University joined the initiative to Third International "Fascination of Plants Day". The responsible persons for carrying out the local events were members of the department: Ph.D. Olga Avksentyeva, Senior Lecturer Irina Raevskaya, Assistant Julia Popova, graduate student Mary Vasilchenko and undergraduate student Viktoriya Shulik. The organizers of the event were the Department of Physiology and Biochemistry of Plants and Microorganisms VN Karazin Kharkiv National University (<http://www-plantphysiol-bio.univer.kharkov.ua/>), the regional branch of the Ukrainian Society of Plant Physiologists and Student Scientific Society (SSS) of the department. On May 19 within the FoPD at Kharkiv University the exhibition "Green Planet, City, Office..." attracted many visitors, who received the seedlings or mature plants for planting at home or at work.

The exhibition "Amazing plants" aroused interest not only of biology students, but also students and teachers of other faculties. We were presented amazing facts and photos that show a wide variety and unique species of flora. Afterthat all attendees went to the Botanical Garden to get acquainted with tropical and

subtropical plants and to witness the flowering of rododendrons and tree peonies. Moreover, the interactive exhibition “Plants *in vitro*” representing morphogenic and non-morphogenic callus tissues of different plant species. Visitors had the opportunity to observe all the stages of microclonal propagation – from the explants on the culture media to the adapted fertile plants. During workshop students got more closely acquainted with the plant biotechnology, its approaches and could practice by their own using cauliflower after the lecturer’s explanation and video workshop of cauliflower cloning *in vitro* (<http://www.saps.org.uk/secondary/teaching-resources/706-micropropagation-cloning-cauliflowers>).

The most inquiring students were invited to attend the lectures “Why Study Plants?”, “Plants are Saving the Planet” and workshop “Plant Biotechnology for ‘Dummies’” at the Department of Plant Physiology and Biochemistry by Prof. Vasyl Zhmurko and Assist. Prof., Dr. Sci. Olga Avksentyeva. On May 20, the quiz “Secret Life of Green Leaf” hooked various people visiting the Faculty during that time.



Photos: Dr. Olga Avksentyeva

The BBC documentary series demonstrated the interesting aspects of plant life – the daily struggle for survival, which forces them to adapt to extreme conditions. The film reveals the viewer a wonderful and mysterious world of plants previously seemed so familiar! Demonstration of the film was during breaks between the pairs – individual episodes for 10-15 minutes that were dedicated to plants-travelers, plants’ height, flowering (blooming), the struggle for survival, symbiosis. So, it was easy to everyone to touch upon the amazing features of the “secrets” of plants’ life. FoPD initiative in Kharkiv has also been supported by Students Scientific Society and Kharkiv regional department of the Ukrainian Society of Plant Physiologists. The main (local) organizers of the Fascination of Plants Day event in Kharkiv hope to start the “celebration tradition” for students, researchers and lecturers of the Biological Faculty. Pupils, students of the Biology Department, 23 college students of Green Building and Landscape Design workshops *in vitro* plant culture. University Hall photo exhibition “Plants Biodiversity of the World”.

Here is the principal position of the FoPD participants from this institution: “Such events are very valuable to promote the importance of scientific research in the field of plant biology, to draw attention to the important role of plants in sustainable human development, in order to pay more attention to “advertising” of plants and the people, who are studying plant organisms. We hope that the International Fascination of Plants Day will become a tradition for students, teachers and scientists of biological faculty of V.N. Karazin Kharkiv National University, which annually attract more and more “plant biology enthusiasts”!”

Report prepared by Dr. Olga Avksentyeva

Students and guests attended the botanical excursion to the coastal slopes of Odessa "Medicinal Plants Around Us" and the presentation of botany online (educational videos "Osvita-Online" as Preparation for Testing-2015: <https://yadi.sk/i/X8yST3x3ghswk>) organized by Dr. Volodymyr Nemertsalov on May 18.



Photos: Dmytro Dryomov, Tetyana Vasylyeva

Cherkasy National University named after Bohdan Khmelnytsky



The University hosted the natural sciences exhibition "Interesting Facts About Plants: Floral Kaleidoscope" of more than 50 photos of exotic, native or introduced representatives of flora and videopresentation of 13 short movies "Fascinating Plants World" on May 19 by Dr. Volodymyr Konohray. Visitors have discovered novel invasive species of Ukraine and reconsidered the understanding of some "common" species.



Photos: Dr. Volodymyr Konohray

National Ecology and Nature Center of Kyiv



During May 14 –16, in the National Ecology and Nature Center of Kyiv Prof., Dr. Sci. Volodymyr Verbitsky and Yuliya Kyslytska organized scientific and practical learners conference "Plants Day" with excursions, competitions, presentations dedicated to various aspects of plants life.



National Dendrological Park "Sofiyvka" NAS of Ukraine, Uman'



On May 19, as part of the celebration of "Plant Day in Ukraine" – at the National Dendrological Park "Sofiyvka" – the scientific seminar "Allochthonous and Alien Plants" was held. At the seminar, three scientific reports on various topics of the plant introduction and ornamental horticulture were presented. Graduate student Olga Porohnyava made the report "Ontogenesis of Yellow Wood (*Cladrastis kentukea* (Dum. Cours.) Rudd) on Conditions of the Right-Bank Forest-Steppe of Ukraine"; junior researcher Tatiana Kovalchuk presented the

report "Winter Hardiness and Frost Resistance of the Sumac (*Rhus* L.) Species in the Bank Forest-Steppe of Ukraine" and Dr. Habil., leading researcher Anna Kuzemko presented the lecture "The Main Trends and Approaches to the Creation of the Compositions in Historical Parks Involving Herbaceous Plants". The seminar was attended by staff of the National dendrological park "Sofiyivka" NAS of Ukraine, students and teachers of the Pavlo Tychyna Uman State Pedagogical University and Uman National University of Horticulture. Presentations and lectures aroused lively discussions and debates.

At the art exhibition, "Plant World inspires", which was also held on May 19, arts and crafts of the employees of the National dendrological park "Sofiyivka" NAS of Ukraine, created by unique techniques using unusual materials, including embroidered paintings, handicrafts from glass beads, flower arrangements, etc. were presented. The exhibition was attended by more than 20 artists, and all of them were awarded valuable gifts.

The following day, May 20, botanical tours for all visitors of the territory of "Sofiyivka" were conducted. The curators of the tour groups were Dr. Iryna Denysko, Junior Researcher Galina Ponomarenko and PhD, Ass. Prof. of Uman State Pedagogical University Galina Chorna. The excursion was attended by nearly 60 people, mainly students and pupils. During the tour, visitors became acquainted with the rich flora of the Park, explored plants from various environmental groups, exposition and thematic areas, and obtained "alphabet" of landscape design in regular and landscape parks, as well as learned interesting facts about the plants mentioned in Greek mythology, particularly Homer's "Odyssey" as the basis of stylistic compositions of the "Sofiyivka".



Photos and report: Halyna Sivko, Nadia Sulyga, Anna Kuzemko



National Park "Homilshanski Lisy", Kharkiv region



On May 23, in the National Park "Homilshanski Lisy" (Zmiyvskiy district, Kharkiv region), the ecological tourist club "Slidopyty" ("Pathfinders") jointed with the Institute of Forestry and Agroforestry named after G.M. Vysotsky organized a botanical field trip. Maryna and Volodymyr Yarotsky gathered together tourists and nature lovers to show them around the Severskiy Donets area and to climb to Kazachia Mountain to honor the oldest oak tree in the Kharkiv region. Visitors also got involved in the activities related to the National Park plants diversity and listened to the legends about flowers and trees. National Nature Park "Homilshansky forests" in the Kharkiv region met the participants with a picturesque palette of landscapes: White lake, old birch grove, secular oaks extra-protected by law, Koropovsky excavation, Pavillion of Love with the breathtaking view on Seversky Donets valley, wavy paths and closely clamped foliaceous forest. Research fellow M. Yarotska along with her colleagues and friends, organized a field quiz with the search of real treasures in the roots, hollow stubs with beaver nibbles, among the patchy flowers with the help of a map, compass and intuition.



Photos: Svetlana Lobazeva

National Park "Gutsulshchyna" (Kosiv, Ivano-Frankivsk region)



On May 14, the 3^d FoPD has been celebrated in the National Natural Park “Gutsulshchyna”. It is very symbolic, as exactly 13 years ago the NNP “Gutsulshchyna” was created. On this day, the staff of the Park organized an open day in the scientific-educational center and presented the newly established ecological and historical-cognitive paths “Ovyd ” and “Baba-Zhbyr” mountains. On that day, the scientific-educational center was visited by the children from Kosiv region schools, teachers from Storozhynets Forest College and tourists. Exhibitions at such room-museums of geology, dendrology, mycology, entomology, botany, phytocomposition, evoked great interest among the visitors. Tourists have shown considerable interest in getting acquainted with the work of laboratories for environmental monitoring and mycology. Everyone had the opportunity to watch the videos of activities of NNP “Gutsulshchyna” and the multimedia presentation "The Unique Flora of Gutsulshchyna".



Photos: 1) Teachers from Storozhynetsky forest college at the Open Doors Day in Park Educational Centre; 2) Setting up the new Cross of the Ukrainian Rebell Army Heroes Grave; 3) View to the neighboring Czernivetska Region from the Pass; 4,6) Little attendees of the educational center “Gutsulshchyna”; 5) Pass route marking.



Photos: Petro Bilousiak, Kateryna Lavruk, Oleg Pogribnyi

The trail was prepared in advance by the scientific staff department and the departments of the ecological science and recreation: the trace route was marked, the scientific description of surrounding forest ecosystems through which the trail runs had been created, the historical and cultural values described, the route –stops designed and installed on the path, vacation spots made, a new and updated cross and the commemorative plaques on the grave of the dead of UPA had also been set. In the ecological-cognitive trail “On the mountains Ovyd and Baba-Zhbyr” grow such Red Book of Ukraine plants as *Cephalanthera longifolia*, *Neottia nidus-avis*, *Dactylorhiza majalis*, *Galanthus nivalis* (snowdrop), and rare plant communities of the relic pine mixed with rocky oak that are listed in the Green Book of Ukraine. On the route were objects of historical, cultural and archaeological heritage: Hutsul remains of an ancient fortification settlement “Horodyschche”, the Dovbush rock, the ancient altar on the Ovyd mountain, the memorial cross on the place of death of warriors of OUN UPA on Baba-Zhbyr mountain.

The information about the events that took place in NNP “Gutsulshchyna” on the occasion of the 3^d FoPD is covered in the following publications: newsletter of NNP “Gutsulshchyna” and regional magazine “Gutsulland”; on Park websites, the Kosiv district state administration, as well as our page in the social network “Facebook”: <https://www.facebook.com/pages/Національний-природний-парк-Гуцульщина/368038556607026?fref=ts>

Desniansko-Starogutsky National Nature Park



During May 3–10 Dr. Serhiy Panchenko guided bike tour in Desniansky Biosphere Reserve UNESCO” Seredyna-Buda – Ochkyne – Byryne – Novgorod-Siversky – Gremyachiy” (Seredyna-Buda, Sumy Region). The main purpose of the event was to attract the society attention to the issues of Desniansky Biosphere Reserve UNESCO and to popularize its landscapes, flora and fauna. Besides that, the educational game for 1st - 3rd grade scholars “How plants travel the world?” in Lenkiv’ska general school took place on May 7, where

children sorted out different groups of seeds on the basis of their ways of dispersal. In Novgorod-Siversky on May 8 at the café “Gubernska 8” kids played the interactive game, “How Plants Reach Success”?, got acquainted with the strategies of plant survival and drew analogies with our society.



Photos: Olexander Sokolenko

National Park "Dermansko-Ostrozkyi" (Ostrog, Rivne region)



On May 9–15 in the National Park "Dermano-Ostrozkyi" (Ostrog, Rivne region) open lectures in schools and botanical tours of the Park took place. Located in the intersection of three geographical regions – Volhynian uplands, Male Polissia (e.g. Minor Polissia) and Podolian uplands this Park has many unique forest phytocenoses. During the excursion, enthusiastic visitors learned some plants typical for this area. One of the Park's special places, the Buschan marsh, has very rich flora that is considered to be one of the largest calcareous fens in Eastern Europe.



Photos: Valentyn Lysiuk

On May 14, researchers from the National Park V. Lysiuk and G. Kalchuk organised the botanical tour for the pupils of Verchivska School of Ostrozsky district and taught them how to identify the typical forest and meadow plants. In turn, on May 19 and 21 in Velbivnenska School of Ostrozsky district and Zdovbytska School of Zdolbuniv District, open lessons were organised to emphasize the importance of plants to the Earth's ecosystems in general and humans in particular. Moreover, on May 28 the Art Gallery of the National University of “Ostrog Academy” hosted the educational event for students aimed for the popularisation of the idea of preservation of biodiversity of the relevant areas. In frame of the FoPD the photo-exhibition of rare plants from Rivnenska Oblast’ and National Park "Dermansko-Ostrozkyi" presentation with the emphasis on its main goals, principles and targets for nature conservation were also organized.



National Park "Dzharylgachsky, Skadov'sk

On May 20, a guided tour was given for pupils from Skadovsk School №2 "Flora as a Part of Nature" by ecologist from "Dzharylgachsky" National Park Nataliya Sheshyna and biology teacher S.P. Ovdienko to the "Turkish bay" – the western part of the city, Kherson region. The organizers introduced plant communities typical of the Dzharylgach island part of the Park and guided pupils to the coastal part in the suburban area "Maryin Gai" that is attractive because of the combination of artificial trees alleys with native steppe and coastal halophytic plant communities. During the excursions, lecturers tested and studied carefully the future educational path basing on the previously developed map, identified plants using the field guides indicating taxonomy (family, genus and species), photographed several ambiguous plants for their upcoming investigation, found medicinal herbs and shared their curing properties, folk tales and tokens related to them. The ecological path was in blossom, generously exposed to the sun, so all the participants received a suntan and had a rest under the hospitable oaks and acacias.



Photos: Nataliya Sheshyna, Volodymyr Tolstych

National Park "Podilsky Tovtry", Khmelnytsky Region



On May 22 in National Park "Podilsky Tovtry" and wetlands "Bakotska Zatoka" (Kamyanets-Podilsky, Khmelnytsky region) Dr. Dmitry Sviridyuk organized the excursion, "Flora from the Red Book of Ukraine", for the students of Natural Sciences Faculty of Ivan Ogiienko Kamyanets-Podilsky National University. During May 18–28 the quiz "Plant Experts" was organized for the cadets of Kamyanets-Podilsky Military Lyceum and pupils of Ecological School in Stara Ushitsa by Marina Yurchenko, Oleg Sabadash, Olena Demyanova and Dmitry Sviridyuk. In addition, the National Park presented the lecture dedicated to local plants identification, exhibition "Save Plants!" collecting the best of photo contest "Plants at the Smartphone Screen" and children pictures "My Spring Bouquet" at the educational center of "Podilsky Tovtry" as well as the "brain ring" game, "Do you know plants?" During May 18–20 Dmitry Sviridyuk organized a scientific expedition "Exploring "Podilsky Tovtry" primroses" in Kadiyevetsky Forestry, the tour to Kamyanets-Podilsky Botanical Garden for local biology teachers and the trip to the rare plants nursery in National Park "Podilsky Tovtry".



Photos: Dmitry Sviridyuk

National Park "Pripyat-Stokhid" (Lubeshiv, Volyn' region)



On May 12, in National Park "Pripyat-Stokhid" (Lubeshiv, Volyn' region) an ecological walking tour "Old Park of Stokhid" (Vita Domashych) was conducted. It is 1 km long and represents magnificent trees: 200-years old lindens, oaks, and acacias from North America. The path follows meadows and hills covered with the ephemeroids such as *Anemona nemorosa* and *A. ranunculoides*, *Bellis perennis*, *Viola odorata*, *Gagea lutea*, etc. as well *de luxe* flowering of *Lamiaceae*, *Cruciferae*, *Asteraceae* and *Fabaceae*. Stokhid River coasts represented water and littoral flora. National Park "Pripyat-Stokhid" (39,351 ha) hosted more them 800 species of vascular plants and 41 is in Red Book of Ukraine: *Hydrocotyle vulgaris*, *Aldrovanda vesiculosa*, *Salvinia natans*, *Dactylorhiza incarnata*, *Lycopodium annotinum*, *Hyperzia selago*, *Lilium martagon*, *Cephalantera longifolia*, *Cypripedium calceolus*, *Epipactis atrorubens*, *Neottia nidus-avis*, *Platantera bifolia*, *Carex umbrosa*, *Betula humilis*, etc. During the excursion students got acquainted with the marshes, their biodiversity and lignum fossile formation as well as air cleaning and carbon dioxide absorbtion. Marshes of the National park "Pripyat-Stokhid" are of international importance and controlled by Ramsar Convention (the Convention on Wetlands of International Importance, especially as Waterfowl Habitat).



Besides that, the so called "verbal journal" "Plants Role in Nature and Humans Life" was dedicated to Park primroses, rare, poisonous (cicuta, celandine, tansy, cow-parsnip, black cherry, etc.) and medicinal plants. In frames of this journal attendees saw the movie about carnivorous plants as mixotrophic organisms such as *Drosera* able to catch and digest insects. Moreover, the quiz for the pupils of 7 and 8 grades about the local flora revealed the keenest participants that were awarded with calendars and posters with the landscapes and plants of National Park "Pripyat-Stokhid"



Photos and report: Vita Domashych, Olga Bubalo



Environmental Excursion in "Lisnyky"



Young botanists organized an ecological tour “Spring Forest Biodiversity” together with the program of the keen entomologists (“Plants as A Source of Animal Diversity: Insects Around Us”) in the protected areas 20 km south of Kyiv in the beautiful locality of Koncha-Zaspa – Nature Park “Golosiivsky”, “Lisnyky”. “Lisnyky” is the forest preserve situated on the right bank of Dnieper River upland sandy terraces and swamps of Vita River (confluent of Dnieper). This year the ecological paths of “Lesniki” along the winding riverbed of Vita River were not occupied by the hungry mosquitoes at the time of FoPD, so the participants fully enjoyed the walk. During the first part of the excursion, participants were told about the natural history of the area, including the geological processes of the past, forming of the modern biota and the recent history of nature conservation activities in Koncha-Zaspa. The main part of the excursion followed with abundant information on local wild plants along with their ecosystem role, medicinal, alimentary and other useful properties. The timing of this excursion was very rewarding in terms of the variety of plants in blossom. The members of the excursion were deeply inspired while observing the beautiful and highly ornamental flowering plants including: yellow flag (*Iris pseudacorus*), Siberian iris (*Iris sibirica*), woodbetony (*Betonica officinalis*), salvia species (*Salvia verticillata*), flowering rush (*Butomus umbellatus*), globeflower (*Trollius europaeus*), cranesbill (*Geranium sanguineum*, *Geranium palustre*), heartsease and dog-violet (*Viola* sp.), as well as some blossoming tree and shrub species such as: willow (*Salix* sp.), bird cherry (*Padus* sp.), hawthorn (*Crataegus*) and many others. Participants were challenged by tree and herb recognition, observing their stems and leaves as well as typical spring plants, including Red Book species (Dr. Andrii Mosyakin). Keen zoologist and naturalist V. Kotsuba commented on the ecological status of the investigated area. Dr. Vitaliy Nazarenko and Dr. Maryna Kaliuzhna identified many insects species and plant pathogens. Visitors were fascinated not only by the plants, but also with the bright-blue male of Eastern slow worm *Anguis colchica*.



Photos: Andrii Mosyakin, Yuliya Krasnylenko, Maryna Kaliuzhna, Stanislav Isaenkov

Research and Educational Project "Zelenyi Likhtaryk"



The excursion "Trip to Golosiivsky Forest" on May 24, organized by the research and Educational project "Zelenyi.Likhtaryk" (Helen Osypchuk), who invited Dr. Mykyta Peregrym (O.V. Fomin Botanical Garden, Educational and Scientific Center "Institute of Biology", Taras Shevchenko National University of Kyiv) was very inspiring and successful.



Photos: Yuriy Veremchuk

Plant Quotes Collection “*Verbum de plantis*”

Lina Kostenko, Rabindranat Tagor, Federiko Garcia Lorka, Alexander Dumas, Thomas Mann, Boris Grebenshikov, Paul McCarthy, Iosif Brodsky, Osip Mandelstam, Vladimir Vysotsky, Yasunari Kawabata... Plants-fascinated, we are not alone! Facebook link: <https://www.facebook.com/groups/138898152957203/>

Plant Art and Photography Contest



Plant Art and Photography Contest "Green World in Focus" dedicated to the 3rd International Fascination of Plants Day in Ukraine has been announced from the 1st of February till the 1st of May 2015. Plant photographers, as well as the artists, representing watercolors, natural dyes stains, herbaristics, clay prints, embroidery, epoxyde resin plant embedding, batik, ikebana and other techniques sent the pictures of their artwork to the Facebook group <https://www.facebook.com/groups/flora.ukraine/>. After the winners were announced, the group was renamed to “Flora of Ukraine” and is aimed at plant identification and discussion. Our jury committee (naturalists and ecologists, photographers of “National Geographic-Ukraine” Mikhaylo Bogomaz and Natalia Schevchenko; plant biotechnologist Dr. Stanislav Isayenkov, plant cell biologist Dr. Yuliya Krasylenko (Institute of Food Biotechnology and Genomics NAS of Ukraine) chose three main winners of the contest in the nomination of “Photography”: 1st prize – Rostyslav Shyvrinskyi (Zakarpattia, Ukraine), 2nd prize – Sergey Ryzhkov (Krivyi Rih, Ukraine) and 3rd prize – Elena Yakovleva (Tsaki, Autonomous Republic of the Crimea, Ukraine).



Winners were awarded with the epoxyde resin-embedded plants from “Pine Top Craft” (Polina Zabizhko) and certificates of participation.



A video about the exhibition for the Fascination of Plants Day of Ukraine by “Intellect TV” <https://www.youtube.com/watch?t=120&v=GaV-4I-eAiI>. We greatly appreciate the sponsorship of the non-governmental organization “The United Help to Ukraine” that supported not only FoPD in Ukraine, but also the scientific and education events “Days of Science. Spring” (May 16-26, 2015) and International Museum Day (May 18) and printed photographs for exhibitions “Rare plants of the Ukrainian flora”, “Lugansk and Donetsk regions’ flora and landscapes”, “Animal world of the Evacuation Zone: Chornobyl” and “Fauna of Garden and Parks of Ukraine”. Many participants of the contest from Ukraine, Armenia, Greece, Belarus and other countries received certificates of participation, special jury awards and their photos were printed for exhibition.







Photos: Dr. Anna Asatryan, Dr. Ganna Boiko, Dr. Yakov Volkov, Dr. Kateryna Popova, Dr. Mykyta Peregrym, Dr. Olena Peregrym, Dr. Vasyl Heluta, Galina Gouz, Ihor Yanchu, Dr. Dmytro Iakushenko, Irina Iakovenko, Elena Yakovleva, Dr. Vlasta Loya, Dr. Oleg Bayer, Dr. Olesya Bezsmertna, Dr. Sergiy Limanskiy, Andrii Tarieiev, Eugene Rudenko, Dr. Alicia Kruchonak, Nataliya Vovk, Anna Voytsekhovich, Dr. Fotis Samaritakis, Maria Zyкова, Dr. Maryna Burlaka, Dr. Nataliya Atamas, Yuriy Bengus, Dr. Oxana Golovko, Olexiy Sokolenko, Olexander Kostenko, Polina Zabizhko, Rostyslav Schyvrinsky, Sergiy Ryzhkov, Volodymyr Kletenkin, and Vladyslav Syaber.

Moreover, the jury of “Plant Art and Photography Contest”, photographers of “National Geographic-Ukraine” Mikhaylo Bogomaz and Natalia Schevchenko supplemented the exhibitions with their own plant photos.



CONCLUSIONS AND FUTURE PROSPECTS

It could be concluded that the Fascination of Plants Day (FoPD) in 2012-2015 was a successful and fruitful event in the Ukraine. It has united the efforts of many nature-oriented enthusiasts and professionals from different regions of Ukraine representing various institutions, universities, botanical gardens, NGOs and other organizations, as well as informal creative groups. The activities of FoPD showed people the great interest of plant science, nature conservation and ecological awareness. Moreover, Fascination of Plants Day has established the unique creative environment for people of science, humanities-minded people and artists working together and discovering the wonderful world of plants from different viewpoints. “FoPD traditions of celebration” give the opportunity to educate “green-minded” people from early childhood, who will be able to build a new, well-informed and partnership-oriented society, especially with the EU integration in process. Furthermore, this all-Ukrainian event is aimed toward attracting the attention of society to the important issues of plant life as well as nature conservation, since our country has biodiverse-rich national parks, landmarks, biosphere reserves and other protected areas with Red-listed plants and unique landscapes.

We are planning to continue this precious tradition of FoPD in Ukraine through the involvement of new, creative and talented people, who adore plants from unique vantage points, including: scientists, farmers, teachers, artists, florists, landscape designers, representatives of biotechnology companies, and other active members of our society through better coordination of the interactive process in 2015. The detailed information and illustrated reports of FoPD in Ukraine can be found at the official EPSO site: <http://www.plantday12.eu/ukraine.htm>, interactive Facebook page <https://www.facebook.com/groups/299423976811032> and website of Days of Science in Ukraine <http://dni-nauky.in.ua/> We hope to expand the circle of enthusiasts interested in plants and explain the importance of knowledge about them to the public. Join us!



Міжнародний
День рослин

18 травня 2015

THANKS TO ALL, WHO SUPPORTED THE THIRD FoPD IN UKRAINE!



WE WILL BE GLAD TO SEE YOU AT THE 4TH FoPD IN 2017!



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LET PLANTS FASCINATE YOU!