

117° Congresso della Società Botanica Italiana onlus

VIII INTERNATIONAL PLANT SCIENCE CONFERENCE (IPSC)

Complesso Belmeloro, Alma Mater Studiorum Università di Bologna, 7 - 10 September 2022

Programme

Wednesday 7 September 2022

- 9:00-12:00 Registration and poster installation
- 12:00-13:00 Welcome lunch
- 13:30-14:00 **Opening ceremony**

Macro Symposium

THE ROLE OF PLANT ECOLOGY AND VEGETATION SCIENCE IN ECOSYSTEM RESTORATION: THEORY AND PRACTICE

Symposium 1

VEGETATION SCIENCE AND PLANT LANDSCAPE RESTORATION: RESEARCHES AND PERSPECTIVES (Chairpersons G. Bazan and S. Casavecchia)

Key words: vegetation dynamics, habitat restoration, habitat assessments, plant landscape conservation, landscape planning

14:00-14:30 • **Carlo Blasi**, Sapienza University of Rome, Italy (25 + 5 min)
“New tools of plant ecology and plant sociology to assess, recover and restore the natural capital”

14:30-15:45 **Communications**

- **Miris Castello**, Alfredo Altobelli, Francesco Liccari et al. (12 + 3 min)
“Vegetation survey and mapping of Lake Doberdò: an analysis for the assessment of habitat conservation status of a disappearing lake of the Classical Karst (NE Italy)”
- **Marco Canella**, Marco Baldin, Simona Bardi et al. (12 + 3 min)
“Project FORESTALL: connecting habitat restoration to social inclusion in the Ramsar site of Valle Averte, southern lagoon of Venice (N-Adriatic Sea)”
- **Giulio Tesei**, Paride D'Ottavio, Mattia Di Silvestri et al. (12 + 3 min)
“The landscape of Central Apennine wooded grasslands: space-time dynamisms and future perspectives”
- **Carmelo Maria Musarella**, Silvio Bagnato, Giuseppe Bombino et al. (12 + 3 min)
“Urban green infrastructures design for the ecological and landscape restoration: the case of the Metropolitan City of Reggio Calabria (southern Italy)”
- **Pietro Minissale**, Salvatore Cambria, Fabio Cilea et al. (12 + 3 min)
“Plant conservation and restoration in the coastal wetlands of Sicily: the case studies of the Natura 2000 sites "Saline di Priolo" and "Pantano Ponterio””

15:45-16:15 Coffee Break

Symposium 2

RESTORATION OF PLANT COMMUNITIES: ECOLOGICAL BACKGROUND AND PRACTICAL EXPERIENCES (Chairpersons S. Maccherini and G. Filibeck)

Key words: plant community restoration, historical ecosystem references, restoration monitoring, restoration and climate change, rewilding

16:15-17:00 • **Rasmus Ejrnæs**, Aarhus University, Denmark (35 + 10 min)
“The restoration of natural plant communities – disturbing baselines and even more disturbing animals”

17:00-18:00 **Communications**

- Silvia Assini, **Gabriele Gheza**, Juri Nascimbene et al. (12 + 3 min)
“Restoration of dry-acidic grasslands and heathlands in the western Po Plain (northern Italy – Life Drylands project)”
- **Pierluigi Cortis**, Antonio De Agostini, Donatella Cogoni et al. (12 + 3 min)
“Seed conservation and development in metallicolous and non-metallicolous orchid populations”
- **Benedetta Gori**, Carla Lambertini, Alessandra Zambonelli (12 + 3 min)
“Riparian vegetation management along artificial channels: first effects on plant community ecology of "Life Green4Blue"”
- **Alessia Masi**, Cristiano Vignola, Lucrezia Masci et al. (12 + 3 min)
“Rewilding vs. cultivation, what plants can tell us about demography after pandemics”

18:00-19:30 **Poster session**

Thursday 8 September 2022

Symposium 3

BIODIVERSITY: A CHALLENGE FOR NATURE CONSERVATION AND ENVIRONMENTAL MONITORING (Chairpersons S. Loppi and J. Nascimbene)

Key words: biodiversity; nature conservation; environmental monitoring

9:00-9:30 • **Bettina Weber**, University of Graz, Austria (25 + 5 min)
“Cryptogamic communities: their biodiversity, functionality, and roles in global biogeochemical cycling in times of global change”

9:30-10:45 **Communications**

- **Francesco Maria Sabatini**, Borja Jiménez-Alfaro, Ute Jandt et al. (12 + 3 min)
“Global patterns of vascular plant alpha diversity”
- **Stefano Martellos**, Pier Luigi Nimis, Matteo Conti et al. (12 + 3 min)
“Digitization and geolocation of specimens from Italian lichen herbaria”
- **David Dolci**, Alessandro Chiarucci, Lorenzo Peruzzi (12 + 3 min)
“Identification of multi-species suitable areas for assisted colonization under climate change scenarios”
- **Simonetta Bagella**, Claudia Angiolini, Marco Caccianiga et al. (12 + 3 min)
“Robotic Monitoring of Habitats: good news from the dune front”
- **Sergio Enrico Favero-Longo**, Enrica Matteucci, Maria Giuseppina Ruggiero (12 + 3 min)
“Rock drawings in Valle Camonica: Monitoring lichen diversity and the efficacy of biodeterioration control towards a joint conservation of the cultural and natural heritage”

10:45-11:15 Coffee Break

Symposium 4

PLANT SPECIES CONCEPTS IN THE 21TH CENTURY (Chairpersons G. Cristofolini and G. Domina)

Key words: taxonomy, speciation, evolution, natural selection, genome

11:15-11:45 • **Dirk Carl Albach**, University of Oldenburg, Germany (25 + 5 min)
“The species in the age of phylogenomics - Types, hybrids and convergence”

11:45-13:00 **Communications**

- **Jacopo Franzoni**, Giovanni Astuti, Gianluigi Bacchetta et al. (12 + 3 min)
“Preliminary genetic analyses of central Mediterranean taxa in the *Dianthus virginicus* complex (Caryophyllaceae) suggest taxonomic inflation”
- **Antonio Giacò**, Lucia Varaldo, Gabriele Casazza et al. (12 + 3 min)
“An integrative taxonomic study of *Santolina* (Asteraceae) from southern France and north-eastern Spain”
- **Eleonora Manzo**, Salvatore Tomasello (12 + 3 min)
“Integrative taxonomy in the 21st century. An example from the intricate plant genus *Xanthium* (Ambrosinae, Asteraceae)”
- **Martina D’Agostino**, Giulia Albani Rocchetti, Marta Carboni et al. (12 + 3 min)
“Study of the Italian and French populations of *Vicia cusnae* (Fabaceae)”
- **Giulio Barone**, Emilio Di Gristina, Gianniantonio Domina (12 + 3 min)
“On the concept of species in cultivated plants and its consequences in alien species and CWR”

13:00-14:00 Lunch, **Poster session**

Symposium 5

PRIMARY AND SECONDARY METABOLITES PRODUCED BY AQUATIC PHOTOTROPHS WITH IMPLICATIONS FOR THE ENVIRONMENT AND BIOECONOMY (Chairpersons R. Pistocchi and M. Cantonati)

Key words: biodiversity, biotechnology, environmental issues, infochemicals

14:00-14:30 • **Ana Bartual Magro**, Universida de Càdiz, Spain (25 + 5 min)
“Allelopathic interactions in the diatom phycospheres: ascertaining the ecological role of polyunsaturated aldehydes in the ocean”

14:30-15:45 **Communications**

- **Saverio Savio**, Riccardo Turchi, Debora Paris et al. (12 + 3 min)
“Biorefining the diatom *Staurosirella pinnata* for drug discovery”
- **Mara Simonazzi**, Laura Pezzolesi, Tânia K Shishido et al. (12 + 3 min)
“Unveiling new potential toxic metabolites from cyanobacteria through genome mining: a case study from an Italian drinking water reservoir”
- **Tomas Morosinotto**, Francesca Bucci, Alessandra Bellan (12 + 3 min)
“Algae biomass as sustainable source of protein and lipids”
- **Damiano Spagnuolo**, Viviana Bressi, Antonio Manghisi et al. (12 + 3 min)
“Influence of aqueous phase from hydrothermal carbonization (AHL) of *Sargassum muticum* (Phaeophyceae) on germination and growth of *Phaseolus vulgaris* (Fabaceae)”
- **Simona Armeli Minicante**, Lucia Bongiorni, Amelia De Lazzari (12 + 3 min)
“Bio-based products from Mediterranean seaweeds and their opportunities in the bioeconomy field”

15:45-16:15 Coffee Break

Symposium 6

URBAN GREEN-SPACE PLANNING AND MANAGEMENT: FROM FUNCTIONAL ASPECTS TO ECOSYSTEM BENEFITS

(Chairpersons M. Galloni and F. Orlandi)

Key words: urban ecosystems, urban green areas, ecosystem benefits, citizen science, environmental education, urban ecological corridors, urban flora

16:15-16:45 • **Mario Balzan**, Malta College of Arts, Science and Technology, Malta (25 + 5 min)
“Mainstreaming nature in urban green space planning and management”

16:45-18:00

Communications

- **Marta Pianta**, Mariasole Calbi, Alexandre Changenet et al. (12 + 3 min)
“Plant functional groups and vegetation dynamics within urban ecosystems: the ECOLOPES’ project approach”
- **Giulia Capotorti**, Laura Zattero, Sandro Bonacquisti et al. (12 + 3 min)
“On biodiversity friendly Green Infrastructure planning: contribution of plant ecology to the monitoring and valorization of peri-urban environments in the Metropolitan City of Rome (Mediterranean Italy)”
- **Giulia Santunione**, Alice Barbieri, Elisabetta Sgarbi (12 + 3 min)
“Analysis of particulate matter trapped by four different shrub species in an urban forest: quantification and characterization”
- Marco Fornaciari, Federico Rossi, **Desirée Muscas** et al. (12 + 3 min)
“Multiple ecosystem benefits of urban green-space: two case studies”
- **Chiara Acquaroli**, Nicola Lothar Herrmann, Simone Flaminio et al. (12 + 3 min)
“Students 4 pollinators: a citizen science project in urban green areas to teach plant diversity and pollinator conservation to young generations”

18:00-19:00 **General Meeting of the Italian Botanical Society (members only)**

20:30-23:30 **Congress dinner**

Friday 9 September 2022

Symposium 7

TRANSLATING PLANT RESEARCH FROM LAB TO LIFE: CELLULAR, MOLECULAR AND BIOTECHNOLOGICAL APPROACHES FOR A SUSTAINABLE DEVELOPMENT

(Chairpersons L. Navazio and M. Lenucci)

Key words: plant cell and molecular biology, plant biotechnology, plant growth and differentiation, plant environment interactions, productivity and sustainability challenges

9:00-9:30 • **Zoe Popper**, National University of Ireland Galway, Ireland (25 + 5 min)
“A wall of opportunities: from adaptation to exploitation”

9:30-10:45

Communications

- **Sofia Montanari**, Mirko Salinitro, Annalisa Tassoni (12 + 3 min)
“Root growth response to localized selenium enrichment in soil: a comparison between hyperaccumulator and non-accumulator species”
- **Camilla Badiali**, Valerio Petruccelli, Fabio Sciubba et al. (12 + 3 min)
“Innovative approaches for controlling *Botrytis cinerea* infections in tomato by using poly (lactic-co-glycolic acid) nanoparticles for the vehiculation of antifungals”

- **Paola Malaspina**, Cristina Danna, Laura Cornara et al. (12 + 3 min)
“Characterization of *Eucalyptus cinerea* and *E. nicholii* by-products for agricultural applications”
- **Maria De Benedictis**, Antonia Gallo, Pietro Roversi et al. (12 + 3 min)
“*Arabidopsis thaliana* tolerance to cadmium stress is mediated by endoplasmic reticulum stress sensing”
- **Gianmaria Oliva**, Giovanni Vigliotta, Mattia Terzaghi et al. (12 + 3 min)
“Effect of Plant Growth-Promoting Rhizobacteria on maize seedlings cultivated on saline soil: changes in root morphologies and amelioration of saline stress response”

10:45-11:15 Coffee Break

11:15-12:30

Communications

- Chiara Suanno, Elisa Tonoli, **Stefano Del Duca** et al. (12 + 3 min)
“Pollensomes cargo and markers in *Actinidia chinensis* Planch.”
- **Marco Giovannetti**, Arianna Capparotto, Daniele Castelli et al. (12 + 3 min)
“Leveraging plant natural variation to investigate root phosphate homeostasis”
- **Patrizia Cesaro**, Nadia Massa, Daniela Campana et al. (12 + 3 min)
“Effects of mycorrhizal inoculation on responses of *Solanum lycopersicum* in the early stages of the symbiosis”
- **Martina Cerri**, Sara Cannavò, Alma Costarelli et al. (12 + 3 min)
“Disentangling the interaction between rice and *Azolla filiculoides*”
- **Ylenia De Luca**, Niklaus Zemp, Antonia Cristaudo et al. (12 + 3 min)
“Development of molecular markers for rapid sex screening in *Cycas revoluta* and in *Ginkgo biloba*”

12:30-14:00 Lunch

Symposium 8

FUNGI: α -BIODIVERSITY, ECOSYSTEM SERVICES, OPEN SCIENCE (Chairpersons G. Venturella and L. Nicola)

Key words: biodiversity, conservation, species distribution, social network data sharing web sites, ecosystem services, citizen science

- 14:00-14:30
- **Gregory M. Mueller**, Chicago Botanic Garden, Illinois, USA (25 + 5 min)
“Building on interactions between the professional and non-professional mycological communities to advance fungal conservation”

14:30-15:45

Communications

- **Claudia Perini**, Irene Mazza, Elena Salerni (12 + 3 min)
“The Fungal communities of Sienese “biancana” badlands”
- **Marta Elisabetta Eleonora Temporiti**, Lidia Nicola, Solveig Tosi (12 + 3 min)
“The influence of plastic pollution on soil fungal biodiversity”
- **Federica Spina**, Viktoria Ilieva, Davide Ferrero et al. (12 + 3 min)
“Exploiting the fungal community against plastic polymers”
- **Simone Di Piazza**, Grazia Cecchi, Paolo Vassallo et al. (12 + 3 min)
“Truffle and ecosystem services: the hidden potential of the Ligurian countryside”
- **Nicola Baldoni**, Mara Rondolini, Francesco Prosperi et al. (12 + 3 min)
“Preliminary approach to mycorrhization of micropropagated linden sprouts with *Tuber borchii*”

15:45-16:15 Coffee Break

Symposium 9

FROM MEDICINAL PLANTS TO HEALTH PRODUCTS THROUGH SPECIALIZED METABOLISM (Chairpersons M. Germanò and F. Maggi)

Key words: medicinal plants, crude drugs, specialized metabolites, biological activities, natural products

16:15-16:45 • **Juha-Pekka Salminen**, University of Turku, Finland (25 + 5 min)
“Plant tannin analytics and its importance to understanding tannin bioactivity”

16:45-18:00

Communications

- **Marta Ferrati**, Giovanni Benelli, Roman Pavela et al. (12 + 3 min)
“Development of a highly stable *Carlina acaulis* essential oil nanoemulsion for managing agricultural pests”
- **Lorenzo Marincich**, Margherita Bellucci, Mariacaterina Lianza et al. (12 + 3 min)
“Red-fleshed apple: polyphenol profile characterization, antioxidant activity evaluation and development of a green extraction method for anthocyanins recovery”
- **Marinella De Leo**, Valentina Parisi, Valentina Santoro et al. (12 + 3 min)
“Exploring *Punica granatum* L. peels from different southern Italian varieties for their potential healthy value”
- **Milena Masullo**, Zahra Sadeghi, Antonietta Cerulli et al. (12 + 3 min)
“*Perovskia artemisioides* Boiss roots as source of diterpene constituents with *in vitro* anti-inflammatory activity”
- **Antonella Smeriglio**, Cristina Danna, Miriam Bazzicalupo et al. (12 + 3 min)
“The phytochemical profile of leaf and rhizome of *Peucedanum ostruthium* (L.) W. D. J. Koch influences the antioxidant, anti-inflammatory, and wound healing properties of this medicinal plant”

18:00-18:30

Congress Closure

Saturday 10 September 2022

Evento Post-Congress

(Aula A del Complesso Belmeloro, Alma Mater Studiorum Università di Bologna)

“PIÙ NATURA NEGLI ECOSISTEMI URBANI PER IL FUTURO SOSTENIBILE E RESILIENTE DELLE CITTÀ”

9:00-10:15

Saluti delle Autorità e introduzione al Simposio

(Coordina C. Blasi)

- **Giovanni Molari**, Magnifico Rettore Alma Mater Studiorum Università di Bologna
- **Antonio Pietro Marzo**, Generale C.A. Comandante delle Unità Forestali, Ambientali e Agroalimentari dell'Arma dei Carabinieri
- **Marco Marchetti**, Presidente Fondazione AlberItalia
- **Alessandro Chiarucci**, Presidente Società Botanica Italiana
- **Enrico Giovannini**, Ministro delle Infrastrutture e della Mobilità Sostenibile, Portavoce dell'Alleanza Italiana per lo Sviluppo Sostenibile (ASviS) - Video
- **Giovanni Maria Flick**, Presidente Emerito della Corte Costituzionale
“Il significato culturale, storico e ambientale dell'inserimento di biodiversità ed ecosistemi nella Costituzione Italiana”

10:15-11:15

Prima sessione

- **Maria Carmela Giarratano**, Capo Dipartimento amministrazione generale pianificazione e patrimonio naturale, Ministero della Transizione Ecologica
- **Alessandra Stefani**, Direttrice Generale Ministero delle Politiche Agricole, Alimentari e Forestali
“Vivaismo forestale al servizio della Biodiversità e del Capitale Naturale”
- **Paolo D’Aprile**, Capo Dipartimento Unità di Missione per il PNRR, Ministero della Transizione Ecologica
- **Nada Forbici**, Presidente Assofloro, Coordinatore Consulta Nazionale Florovivaismo Coldiretti
“La produzione vivaistica forestale italiana, tra necessità e rilancio. Il ruolo dei vivai privati”
- **Massimo Labra**, Coordinatore scientifico spoke 'Urban Biodiversity' del Centro Nazionale per la Biodiversità
“Biodiversità funzionale della città: la sfida del Centro Nazionale del MUR”
- **Emanuela Medda**, Centro di riferimento per le Scienze comportamentali e la Salute mentale, Istituto Superiore di Sanità
“Aree verdi, resilienza e salute mentale: evidenze sperimentali ed epidemiologiche”

11:15-13:30

Seconda sessione (Coordina A. Chiarucci)

- **M.C. Siniscalco**
“Torino città verde: l'evoluzione degli ultimi anni”
- **R. Gentili**, G. Galasso, C. Montagnani, S. Citterio
“Flora e vegetazione di aree marginali o degradate da recuperare nel Comune di Milano”
- **S.P. Assini**, P. Nola
“Il verde urbano e periurbano nelle ricerche dell'Università di Pavia: passato, presente e futuro”
- **G. Venturella**
“Più natura in città: casi studio in Puglia e Sicilia”
- **A. Lallai, L. Podda**, M. Sarigu, G. Bacchetta
“Programmare la sostenibilità delle città del futuro: l'esempio del progetto sul verde pubblico del comune di Assemini (Cagliari)”

Dibattito

- **L. Zattero**, G. Capotorti, S. Bonacquisti, E. Del Vico, F. Manes, V. De Lazzari, G. Scarascia Mugnozza, R. Salvati, G. Eusepi, M. De Horatis, B. Bertani, M. Marchetti
“Scienza della vegetazione applicata alla forestazione urbana e periurbana della Città Metropolitana di Roma capitale”
- **A. Canini**, R. Braglia, E.L. Redi, F. Scuderi
“Piante autoctone per la rigenerazione sostenibile degli ecosistemi urbani”
- **C.M. Musarella**
“Naturali, sostenibili e... botaniche: le buone pratiche nella pianificazione di interventi naturalistici nella Città Metropolitana di Reggio Calabria”
- **S. Landi**, G. Angelini
“Sviluppo di protocolli per quantificare i servizi ecosistemici delle foreste urbane”

Dibattito

- **Carlo Blasi** - Conclusioni e linee programmatiche per il prossimo futuro