

118° Congresso della Società Botanica Italiana onlus

IX INTERNATIONAL PLANT SCIENCE CONFERENCE (IPSC)

Pisa, Polo Didattico San Rossore 1938, 13 - 16 September 2023

Programme

Wednesday 13 September 2023

9:30-12:30 Administrative Meetings of the Working Groups. Registration

13:00-13:45 **Opening ceremony**

13:45-14:15 Plenary opening lecture: **Jennifer McElwain**, Trinity College Dublin, Ireland (25 + 5 min)
“A journey through Earth's deep past: 400 million years of plant and atmospheric evolution”

Symposium 1

MOLECULAR AND CELL BIOLOGY

(Chairpersons: L. Navazio and L. Sanità di Toppi)

Key words: Algae, Bryophytes, Functional and integrative biology, Fungi, Lichens, Stresses

14:30-15:00 • Invited lecture: **Vasileios Fotopoulos**, Cyprus University of Technology, Cyprus (25 + 5 min)
“The role of reactive oxygen, nitrogen and sulfur species as regulators of plant abiotic stress responses”

15:00-16:30

Communications

- Federica Brandizzi, **Luciana Renna** (12 + 3 min)
“Multiple contact sites investigation for chloroplast homeostasis in plant cells”
- **Claudio Varotto**, Enrico Barbaro, Daniela Bertoldi et al. (12 + 3 min)
“*ACR3* is a key player in arsenic detoxification in bryophytes”
- Mara Cucinotta, Alex Cavalleri, **Marta A. Mendes** et al. (12 + 3 min)
“Ovule number and fertility are regulated epigenetically during drought stress conditions”
- Eleonora Greco, **Emanuela Talarico**, Maria Letizia Madeo et al. (12 + 3 min)
“Short term exposition to acute cadmium toxicity induces the loss of root gravitropic stimuli perception through PIN2 polar auxin transport in *Arabidopsis thaliana*”
- **Silvia Perotto**, Silvia De Rose, Yukari Kuga et al. (12 + 3 min)
“Nutrient transfer and metabolism in orchid mycorrhiza, as revealed by gene expression and stable isotope labelling in the *Serapias vomeracea-Tulasnella calospora* association”
- **Luigi Sanità di Toppi** (12 + 3 min)
“From *Marchantia polymorpha* to *Arabidopsis thaliana*: old and new roles of the ‘multi-tasking’ enzyme phytochelatin synthase in land plants”

16:30-17:00 Coffee Break

Symposium 2

TAXONOMY, SYSTEMATICS AND EVOLUTION

(Chairpersons: F. Selvi and S. Tosi)

Key words: Algae, Bryophytes, Fungi, Lichens, Tropical plants, Vascular plants

17:00-17:30 • Invited lecture: **Christoph Oberprieler**, University of Regensburg, Germany (25 + 5 min)
“Wettstein goes Carrara: integrative species delimitation in hybridising plant groups”

17:30-19:00

Communications

- **Martina Braconcini**, Susanna Gorrasi, Paolo Barghini et al. (12 + 3 min)
“Diversity of marine fungi associated with the ascidian *Halocynthia papillosa*”
- **Beatriz Lucas Arida**, André V. Lucci Freitas, Maria G. Gutierrez Camargo et al. (12 + 3 min)
“What is the role of pollinator-mediated selection on the floral coloration polymorphism of the Neotropical orchid *Epidendrum fulgens*?”
- **Martino Adamo**, Katarina Skokanová, Javier Bobo-Pinilla et al. (12 + 3 min)
“Molecular evidence and environmental niche evolution at the origin of the disjunct distribution in three mountain endemic *Tephrosieris* (Asteraceae) of the Mediterranean basin”
- **Domenico Gargano**, Hirzi Luqman, Domenico Amantea et al. (12 + 3 min)
“Experimental crosses suggest multifaceted patterns of reproductive barriers among genetically distinct lineages of the *Dianthus virgineus* complex (Caryophyllaceae)”
- **Manuel Tiburtini**, Silvia Fruzzetti, Liliana Bernardo et al. (12 + 3 min)
“A morphometric study of Calabrian-Sicilian Endemic *Armeria* taxa (Plumbaginaceae)”
- **Gianniantonio Domina**, Daniela Longo, Eckhard von Raab-Straube et al. (12 + 3 min)
“A revision of *Oncostema* (Asparagaceae, Scilloideae) in Italy”

19:30-21:00

Welcome cocktail at the Botanic Garden and Museum of the University of Pisa

Thursday 14 September 2023

Symposium 3

BIODIVERSITY

(Chairpersons: A. Florenzano and M. Nepi)

Key words: Archaeobotany, Biodiversity informatics, Diversity in reproductive strategies, Field and remote monitoring, Floristics, Palynology, Plant conservation, Research in Botanical Gardens

8:30-10:30

Communications

- **Assunta Florenzano** (12 + 3 min)
“Archaeobotany to explore long-term environmental changes and human impact in Italy”
- **Gianni Bedini**, Fabrizio Bartolucci, Fabio Conti et al. (12 + 3 min)
“Floritaly, an R package to access the Checklists of the vascular flora of Italy”
- Alessio Mo, **Diana Cruz**, Alice Fuggirai et al. (12 + 3 min)
“Seed germination responses of annual back dune species to current and future climatic scenarios”
- **Andrea Bertacchi**, Tiziana Lombardi (12 + 3 min)
“UAV monitoring of the spread of *Juniperus macrocarpa* on the dunes of NW Tuscany”
- **Luana Francesconi**, Matteo Conti, Gabriele Gheza et al. (12 + 3 min)
“Dolichens project: a dynamic inventory of the lichen biota of the Dolomites”
- **Cristiano Vignola**, Alessia Masi, Jordan Palli et al. (12 + 3 min)
“Palynological evidence of climatic variability and reforestation in Italy during the Little Ice Age (LIA)”
- **Angelino Carta**, Simone Orsenigo, Elena Zappa et al. (12 + 3 min)
“Phylogenetic and trait-based correlates of extinction risk in Italian flowering plants”
- **Marco Canella**, Núria Beltrán-Sanz, Valentina Boscaroli et al. (12 + 3 min)
“Alpine Botanic Gardens as treasure chests of biodiversity for the quasi in situ conservation of Plant Genetic Resources”

10:30-11:00

Coffee Break

Symposium 4

ENVIRONMENTAL MONITORING AND POLICIES

(Chairpersons: S. Loppi and A. Montagnoli)

Key words: Bioindicators, Biological invasions, CITES, Conservation policies, Forestry, Monumental trees, Phytoremediation, Plants and environment

11:00-13:00

Communications

- **Lisa Grifoni**, Aldo Winkler, Francesca Boldrighini et al. (12 + 3 min)
“Magnetic and chemical biomonitoring with lichens and trees leaves for the conservation of cultural heritage”
- **Lara Assunta Quaglini**, Florencia Yannelli, Federica Fasano et al. (12 + 3 min)
“Influence of the structure of resident plant communities and abiotic characteristics on the performance of the invasive alien species *Senecio inaequidens*”
- **Emanuele Pelella**, Flaminia Mariani, Simona Ceschin (12 + 3 min)
“Impact of the invasive alien macrophyte *Ludwigia hexapetala* on freshwater ecosystems”
- **Viola Alessandrini**, Iduna Arduini (12 + 3 min)
“Effects of the invasive alien *Salpicbroa organifolia* on the soil seed bank of a mixed forest (San Rossore, Migliarino, Massaciuccoli Regional Park, Pisa)”
- **Martina Pollastrini**, Filippo Bussotti (12 + 3 min)
“Forest monitoring updates: physiological indicators of tree health for detecting and understanding a changing environment”
- **Annamaria Gentile**, Patrizia Iannece, Ivano Spiniello et al. (12 + 3 min)
“Contaminants of emerging concern and antimicrobial resistance: use of nature-based solutions for a safe civil wastewater reus”
- **Alice Peduzzi**, Elisa Brasili, Diego Piacentini et al. (12 + 3 min)
“Salt-stress, effects on the root system of two *Sorghum bicolor* hybrids: morpho-functional, cytohistological and metabolomic analyses”
- **Alba Cuena-Lombraña**, Mauro Fois, Michela Marignani et al. (12 + 3 min)
“Threats and vulnerabilities of Sardinian wetlands: from environmental to botanical perspective”

13:00-14:00

Lunch

PARALLEL SESSIONS OF ORAL POSTER PRESENTATIONS 1

14:00-15:45

oral poster presentations (3+2 minutes) in 4 parallel sessions

Parallel session A1 (Chairpersons A. Andreucci, L. Sanità di Toppi): 4.8. Plants and environment; 5.4. Biotechnologies

Parallel session B1 (Chairpersons A. Carta, L. Peruzzi): 2.5. Tropical plants; 2.6. Vascular plants; 3.1. Archaeobotany; 3.2. Biodiversity informatics; 3.3. Diversity in reproductive strategies; 3.6. Palynology

Parallel session C1 (Chairpersons A. Braca, G. Flaminì): 5.3. Bioactivities; 5.7. Medicinal plants; 5.8. Phytochemistry

Parallel session D1 (Chairpersons A. Bertacchi, D. Ciccarelli): 4.5. Forestry; 5.5. Cultural heritage; 6.2. Ecosystems and communities; 6.3. Functional traits

15:45-16:15

Coffee Break

PARALLEL SESSIONS OF ORAL POSTER PRESENTATIONS 2

16:15-17:45

oral poster presentations (3+2 minutes) in 4 parallel sessions

Parallel session A2 (Chairpersons L. Paoli, M. Ruffini Castiglione): 1.1. Algae; 1.2. Bryophytes; 1.3. Functional and integrative biology; 1.4. Fungi; 1.6. Stresses; 2.3. Fungi; 4.1. Bioindicators; 4.7. Phytoremediation

Parallel session B2 (Chairpersons G. Bedini, A. Carta): 3.5. Floristics; 3.7. Plant conservation; 3.8. Research in Botanical Gardens

Parallel session C2 (Chairpersons R. Ascricchi, L. Pistelli): 5.1. Agrobiodiversity; 5.2. Applied symbiotic interactions; 5.6. Food plants; 6.5. Specialized metabolites

Parallel session D2 (Chairpersons I. Arduini, A. Bertacchi): 3.4. Field and remote monitoring; 4.2. Biological invasions; 6.1. Climate change; 6.6. Vegetation

18:00-19:00

General Meeting of the Italian Botanical Society (members only)

20:30-23:30

Congress social dinner

Friday 15 September 2023

Symposium 5

BIOTECHNOLOGY AND APPLIED BOTANY (Chairpersons: N. De Tommasi and M. Lenucci)

Key words: Agrobiodiversity, Applied symbiotic interactions, Bioactivities, Biotechnologies, Cultural heritage, Food plants, Medicinal plants, Phytochemistry

8:30-10:30

Communications

- **Gemma Chiaffarelli**, Nicolò Sgalippa, Ilda Vagge (12 + 3 min)
“Agrobiodiversity decline and recovery: a multi-scale issue. A pilot assessment experience in the Po Plain district”
- **Matteo Chialva**, Davide Lucien Patono, Leonardo Perez de Souza et al. (12 + 3 min)
“The mycorrhizal root-shoot axis elicits *Coffea arabica* growth under low phosphate conditions”
- **Maria Ponticelli**, Vittorio Carlucci, Daniela Russo et al. (12 + 3 min)
“Olive oil exhausted pomace Green extraction techniques: phytochemical characterization and biological activities”
- **Natasha Damiana Spadafora**, Antonella Muto, Carsten Muller et al. (12 + 3 min)
“Simultaneous characterisation of *Prunus persica* fruit volatilome and gene expression profile for a better understanding of molecular mechanisms underlying changes of peach during post-harvest storage”
- **Giulia Caneva** (12 + 3 min)
“Wonder, Power, and Love: Agostino Chigi's message written in the language of plants at the dawn of a new era”
- **Massimo Tacchini**, Gianni Sacchetti, Chiara Chiozzini et al. (12 + 3 min)
“In vitro digestion of three Ethiopian varieties of *Eragrostis tef*”
- **Simona Trincia**, Ilaria Chiocchio, Manuela Mandrone et al. (12 + 3 min)
“Metabolomic analysis and bioactivities of *Arbutus unedo* leaves harvested across the seasons in different natural habitats of Sardinia (Italy)”
- **Annunziata Paolillo**, Francesco Sottile, Milena Masullo et al. (12 + 3 min)
“Phytochemical investigation of *Cornus sanguinea*”

10:30-11:00

Coffee Break

Symposium 6

ECOLOGY (Chairpersons: F. Antognoni and P. Fortini)

Key words: Climate change, Ecosystems and communities, Functional traits, Life strategies, Specialized metabolites, Vegetation

11:00-11:30

- Invited lecture, **Douglas L. Godbold**, University of Bodenkultur Wien, Austria (25 + 5 min)
“Who’s driving who? Community ecology of trees and ectomycorrhizas”

11:30-13:00

Communications

- **Silvano Lodetti**, Margherita Tognela, Pietro Fanchini et al. (12 + 3 min)
“Multifaceted assessment of vegetation and soil temperatures changes in the Orobie Alps after 13 years of monitoring”
- **T'ai Gladys Whittingham Forte**, Michele Carbognani, Giorgio Chiari et al. (12 + 3 min)
“Vegetation dynamics and species responses of an alpine grassland to 5 years of experimental warming and drought”
- **Nicodemo Giuseppe Passalacqua**, Simone Rovito, Antonio Lagudi (12 + 3 min)
“Surveying pasture communities in diachronic analyses by 3D Models”
- **Daniela Ciccarelli**, Cleusa Bona, Angelino Carta (12 + 3 min)
“Coordination between leaf and root traits in Mediterranean coastal dune plants”
- **Emily Cioni**, Alessandra Braca, Fabiano Camangi et al. (12 + 3 min)

“LC-MS untargeted metabolomic analysis of the halophyte *Salsola tragus* in the climate change scenario revealed a promising phytocomplex”

- **Cristina Gasperini**, Kurt Bollmann, Jörg Brunet et al. (12 + 3 min)
“Soil seed bank responses to edge effects in temperate European forests”

Symposium 7

A COSA SERVIRÀ MAI LA (STORIA DELLA) BOTANICA?

(Moderatore G. Carrada)

14:00-16:30 Lo studio della Storia della Botanica non rappresenta un classico studio "antiquario", fine a sé stesso, bensì assume oggi un significato innovativo e rilevante, sia per chi fa ricerca, sia per illuminare aspetti importanti della nostra cultura. Quest'anno ricorrono i 2000 anni dalla nascita di Plinio il Vecchio, botanico antesignano, e i 480 anni dalla fondazione dell'Orto Botanico di Pisa. Assieme ad autorevoli rappresentanti di alcune delle sedi botaniche italiane più significative dal punto di vista storico, questo Simposio si propone di ricostruire vicende, storie e personaggi che hanno contribuito a tenere alto il nome della Botanica Italiana e, più in generale, della cultura del nostro Paese.

Interverranno:

Barbara Baldan (Università di Padova), **Paolo Caputo** (Università di Napoli "Federico II"), **Juri Nascimbene** (Università di Bologna), **Alessio Papini** (Università di Firenze), **Lorenzo Peruzzi** (Università di Pisa), **Fabio Attorre** (Sapienza Università di Roma), **Maria Consolata Siniscalco** (Università di Torino), **Francesco Maria Raimondo** (Università di Palermo), **Solveig Tosi** (Università di Pavia)

16:30-17:00 **Congress Closure**

Saturday 16 September 2023

Evento Post-Congress

9:00-13:00 Field excursion in the San Rossore Estate (Pisa), Natural Park of Migliarino - San Rossore – Massaciuccoli

The timetable may be modified
