

# Società Botanica Italiana

## 121° Congresso



## XII International Plant Science Conference (IPSC)

Reggio Calabria, 2 - 5 September 2026





## Scientific Committee

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# 121° Congresso della Società Botanica Italiana ETS

XII INTERNATIONAL PLANT SCIENCE CONFERENCE (IPSC)

Aula Magna “A. Quistelli” *Mediterranea* University of Reggio Calabria

2<sup>nd</sup> - 5<sup>th</sup> September 2026

## Programme

### Wednesday 2nd September 2026

08:30-09:30 Registration

09:30-10:00 Opening ceremony and institutional greetings

**Prof. Giuseppe Zimbalatti:** Rector of the *Mediterranea* University of Reggio Calabria

**Prof. Marco Poiana:** Director of the AGRARIA Department

**Prof. Massimo Finocchiaro Castro:** Director of the DiGiES Department

**Hon. Francesco Cannizzaro:** Mayor of Reggio Calabria

**Col. Giovanni Misceo:** Regional Commander of the Carabinieri Forestale of Calabria

**Arch. Renato Carullo** Extraordinary Commissioner of the Aspromonte National Park

**Sen. Vincenzo D’Anna:** National Federation of the Professional Orders of Biologists

**Dr. Domenico Luca Laurendi:** Professional Order of Biologists of Calabria

**Dr. Michele Rocco Valenzise:** Professional Order of  
Agronomists and Foresters of the Province of Reggio  
Calabria

**Prof. Antonella Canini:** President of Italian Botanical Society

### **In memory of Sandro Pignatti**

(Chairpersons: Franco Pedrotti and Francesco Maria Raimondo)

- 10:00- 10:30    **Enrico Feoli**  
"Sandro Pignatti: un professore, uno scienziato, un maestro"
- 10:30-11:00    Coffee Break

## **I Symposium**

### **PLANT DIVERSITY AND BIOLOGICAL CONSERVATION IN A CHANGING WORLD**

(Chairpersons: Alessandro Chiarucci and Gianniantonio Domina)

- Key words:** Plant conservation, Climate change, Land-use change, Archaeobotany, Biological invasion, Natural selection, Taxonomic advances, Vegetation, Functional traits and Life strategies, Agrobiodiversity, Biodiversity informatics, Phylogeography, Plant macroecology, Biodiversity modelling (SDMs – Species Distribution Models), Conservation policies, CITES
- 11:00-11:35    • Invited lecture: **Thomas Wohlgemuth**, Swiss Federal  
Institute for Forest, Snow and Landscape Research WSL (25 + 10  
min)  
"Global change effects on plant species are context-  
dependent"
- 11.35-13:05    **Communications** (10 + 5 min)
- **Giovanni-Breogán Ferreira-Lera**, Norma-Yolanda Ochoa-Ramos,  
Ángel Penas et al.  
"Species-specific climate vulnerability in four protected Euro-  
Mediterranean orchids revealed by distribution modelling"
  - **Emanuele Pelella**, Diego Cantini, Simona Ceschin et al.  
"Tracing plant invasions in freshwater habitats: spatial and temporal  
insights from herbarium metadata"

- **Michele Lussu**, Leonardo Ancillotto, Ilaria Bonini et al.  
“Spatial mismatch between orchid diversity, land-use change and conservation coverage in Italy”
- **Emanuele Del Guacchio**, Daniele De Luca, Adriana De Luca et al.  
“Too far from home: The disjunct range of *Cephalaria joppensis* explained by introduction”
- **Ricardo Jorge Quinto-Canas**, D. Xarepe, A. Cano-Ortiz et al.  
“Micro-reserves as a strategic tool for the conservation of threatened flora and habitats in a Mediterranean biodiversity hotspot (Algarve, Portugal)”
- **Diana Maria Cruz Tejada**, Efisio Mattana, Clara Espinosa del Alba et al.  
“Warming enhances photoinhibition of seed germination under water stress in Mediterranean back-dune annuals”

13:05-14:30 Lunch break

14:30-16:30 **Communications** (10 + 5 min)

- **Claudia Moricca**, Erasmo Di Fonso, Rachele Nicolini et al.  
“Digital archaeobotany: standardizing macro-remain data for Central Italy using the ARBOREA System”
- **Domenico Amantea**, Massimo Guccione, Claudia Ferraro et al.  
“A QGIS-based tool for implementing ensemble multi-scale Species Distribution Models for planning plant conservation under global change”
- **Antonio Morabito**, Carmelo Maria Musarella, Domenico Caridi et al.  
“Bioclimatic mapping of Calabria: an integrated model combining climate analysis and habitat distribution”
- **Antonio Zumbo**, Salvatore F. Papandrea, Angelo Mammoliti et al.  
“Management and monitoring of monumental trees: investigative experiences for conservation and valorization”
- **Eliane Sayde**, Daniela Gigante, Adele Tironi et al.  
“Ecogeographic diversity analysis to identify priority sites for *in-situ* conservation and *ex-situ* collection of Crop Wild Relatives”

### **Special Announcement**

**Stefano Martellos**, Ilaria Rosati, Gabriele Bucci et al.  
“Italy joins the GBIF: new opportunities for botanical data mobilization”

16:30-17.00 Coffee Break

17:00-19:00. **Pubblico evento** (in italiano)

**ALBERI MONUMENTALI E BOSCHI VETUSTI  
UN PATRIMONIO DA CONOSCERE E PROTEGGERE**

(Chairperson: Francesco Tarantino)

(Gruppo di lavoro sugli alberi monumentali della Società Botanica Italiana)

**Partecipanti:** Antonella Canini (Presidente della Società Botanica Italiana); Laura Canini (Ministero dell'Agricoltura, della Sovranità alimentare e delle Foreste - MASAF), Giovanni Misceo (Comandante regionale dei Carabinieri “Forestale” della Calabria); Gianluca Piovesan (Università della Tuscia); Francesco Iovino (Accademia Italiana Scienze Forestali); Francesco Besio (Servizio Aree protette, Foreste e Sviluppo della Montagna - Regione Emilia-Romagna); Vincenzo Malacrino (Giornalista); Giovanni Aramini (Settore Tutela del Patrimonio naturale, Parchi e aree naturali protette - Dipartimento Territorio e Tutela dell'Ambiente - Regione Calabria); Donato Salvatore La Mela Veca (Università of Palermo); Andrea Proto (Università Mediterranea di Reggio Calabria)

19:00-20:30 **“Ensemble Mediterranea” Jazz concert and welcome cocktail**

**Thursday, 3rd September 2026**

**II Symposium**

**PLANT AND HABITAT MONITORING**

(Chairpersons: Roberto Canullo and Daniela Gigante)

**Key words:** Bioindicators, Natura 2000 Network, EEC 42/93 Habitat Directive, Plant and community dynamics, Phytoremediation, Habitat restoration, Conservation priorities and Habitat assessments, Red list, Field and remote monitoring, Floristic knowledge, Forestry, Monumental trees, Old growth forests, Palynology, Vegetation resurvey, Long-term

ecological monitoring, Citizen science in plant monitoring, Forest ecology and management

- 9:00-9:35 • **Invited lecture:** František Máliš, University in Zvolen, Slovakia (25 + 10 min)  
“Europe-wide spatial patterns of forest vegetation responses to environmental changes”

9.35-11:05 **Communications** (10 + 5 min)

- **Luana Bertolotti**, Paolo Mazzetto, Valeria Fochi et al.  
“Primary succession and grazing shape biodiversity patterns along alpine deglaciation gradients”
- **Raffaella Margherita Zampieri**, Riccardo Cicchi, Giulia Adembri et al.  
“Delayed tree mortality assessment after wildfires using biosensors”
- **Chiara Scalet**, Marco Cervellini, Giandiego Campetella et al.  
“Contrasting responses of understory plant functional groups to canopy cover in Italian forests”
- **Mattia Bosio**, Fulvio Amato, Elisa Sanguineti et al.  
“Role of urban green in particulate matter capture and allergenic risk mitigation: a multifactorial approach for sustainable urban green infrastructure”
- **Matteo Vita**, Mattia Soppelsa, Fabio Mondello et al.  
“DNA barcoding reveals the diversity of biomass-forming *Cladophoraceae* (*Chlorophyta*) in two Natura 2000 sites in Sicily (Italy)”
- **Leopoldo de Simone**, Mauro Lo Brutto, Luigi Naselli-Flores et al.  
“A new approach to sample orthophoto vegetation plots using Structure from Motion photogrammetry”

11:05-11:30 Coffee Break

### III Symposium

#### BIOLOGICAL INTERACTIONS

(Chairperson: Stefano Loppi)

**Key words:** Interspecific and Intraspecific Interactions, Plant–Microbe Interactions, Reproductive Strategies, Pollination, Facilitation, Competition, Applied symbiotic interactions, Functional and



integrative biology, Plant–soil feedback, Trophic networks, Co-evolution, Chemical ecology, Invasion ecology

11:30-13:00    **Communications** (10 + 5 min)

- **Silvia Mazzuca**, Amalia Piro, Daniela Oliva et al.  
“Root hair differentiation and microbial consortium promote early anchorage strategies in *Posidonia oceanica* seedlings”
- **Miriam Patti**, Agostino Sorgonà, Carmelo Maria Musarella et al.  
“Evaluating native species performance and substrate interaction for mediterranean green walls: a morpho-physiological study”
- **Gabriele Briganti**, Carolina Elena Girometta, Simone Buratti et al.  
“What is a DSE? A global synthesis of diversity and host association in Dark Septate Endophytes”
- **Valentina Lucia Astrid Laface**, Giovanni Spampinato, Carmelo Maria Musarella et al.  
“The role of seed priming in promoting growth and abiotic stress tolerance in the endemic and rare *Salvia ceratophylloides*”
- **Diletta Bisonni**, Andreea Daniela Dam, Leonardo Baciarelli Falini et al.  
“Differences in the mycorrhization evolution of *Tuber melanosporum* Vittad. of two plant species in a long-term unmanaged truffle orchard”

13:00-14:00    Lunch break

14:00-16:30    **Pubblico evento** (in italiano)

**RESTORATION ECOLOGY, REGOLAMENTO PER IL  
RIPRISTINO DELLA NATURA E PIANO DELLA NATURA  
PER IL FUTURO DELLE CITTÀ**

(Chairperson: Carlo Blasi)

(Centro Interuniversitario di Ricerca "Biodiversità, Servizi Ecosistemici e Sostenibilità" – CIRBISES, Sapienza Università di Roma)

**Partecipanti:** Francesco Tomas (Direttore Generale “Tutela della Biodiversità e del Mare” - MASE); Marco Franchini (Assessore con delega alle infrastrutture strategiche, rigenerazione urbana, decoro urbano e turismo del Comune di Reggio Calabria); Antonella Canini (Presidente della Società Botanica Italiana); Giorgio Centurelli (Capo della Segreteria Tecnica del MASE); Antonio Maturani (Dirigente della Direzione Generale “Tutela della Biodiversità e del Mare” - MASE);

Michele Munafò (Responsabile del Servizio per il Sistema Informativo Nazionale Ambientale (DG-SINA) - ISPRA); Massimo Labra (National Biodiversity Future Center, Università di Milano Bicocca); Simona Maccherini (Università degli Studi di Siena); Rodolfo Filippo Gentili (Università degli Studi di Milano-Bicocca); Carmelo Maria Musarella (Università degli Studi Mediterranea di Reggio Calabria)

- 16:30-17:00    Coffee Break
- 17:00-18:30    **General Meeting of the Italian Botanical Society (members only)**
- 21:00            **Congress Social Dinner - L'Accademia Gourmet - Via Largo Cristoforo Colombo, 9, 89125 Reggio di Calabria RC**

**Friday, 4th September 2026**

## **IV Symposium**

### **PLANT CELLULAR AND MOLECULAR BIOLOGY, GENETICS AND BIOTECHNOLOGIES**

(Chairpersons: Marcello Salvatore Lenucci and Anna Maria Mercuri)

**Key words:** Plant breeding, Gene regulation, Genome editing, Stress responses, Plant growth, Morphogenesis, Biotechnologies, Transcriptomics, Proteomics, Metabolomics, Epigenetics, Single-cell biology, Plant signaling pathways, Plant developmental genetics, Synthetic biology, Plant phenotyping platforms, Conservation genomics

9:00-10:30    **Communications** (10 + 5 min)

- **Amalia Piro**, Dante Matteo Nisticò, Daniela Oliva et al.  
“Proteomic insights into *Limnospira maxima*: photosynthetic pigment valorisation and stress responses to emerging environmental pollutants”
- **Lorenzo Ferroni**, Laura Brancaleoni, Edi Simoni et al.  
“Unveiling the reflectance profile of *Selaginella martensii* Spring (Lycopodiophyta) microphylls via hyperspectral dark-field microscopy”
- **Emanuela Talarico**, Marina Camoli, Eleonora Greco et al.

“Exploring inflorescence diversity in wild *Oryza* species through comparative developmental analysis”

- **Pietro Giovannelli**, Faustino Scarcelli, Silvia Mazzuca et al.  
“Local thermal history drives the resilience of *Posidonia oceanica* to present and future marine heatwaves: physiological and molecular features”
- **Daniele Torre**, Viviana Bressi, Claudia Espro et al.  
“From excess algal biomass to high-value bioproducts: hydrothermal carbonization as a circular biotechnology platform for sustainable resource recovery”

10:30-11:00 Coffee Break

## V Symposium

### ETHNOBOTANY AND NATURAL PRODUCTS THROUGH SUSTAINABILITY

(Chairpersons: Maria Paola Germanò and Gianni Sacchetti)

**Key words:** Biomolecules, Plant products, Plant biostimulants, Medicinal plants, Food plants, Cultural heritage, Phytochemistry, Plant metabolites, Chemotaxonomy, Traditional Ecological Knowledge, Sustainable harvesting, Green extraction technologies, Pharmacognosy, Nutraceuticals, Crop Wild Relatives, Agroecology

11:00-11:35 • Invited lecture: Milen I. Georgiev, Bulgarian Academy of Sciences (25 + 10 min)  
“Unveiling anti-obesity and longevity potential of natural products”

11.35-13:05 **Communications** (10 + 5 min)

- **Valentina Parisi**, Maryam Kharatha, Giuliana Donadio et al.  
“*Ferula ammoniacum*, the plant of one thousand and one nights: new chromandione sesquiterpenoids and antibacterial activity of gum ammoniacum”
- **Chiara Fanciari**, Donya Bashiri, Roberta Di Lecce et al.  
“Sustainable valorisation of fruit agro-industrial by-products for phenolic compound recovery as potential plant biostimulants”
- **Anna Cacciola**, Emanuele Rosa, Shiva Pouramin Arabi et al.  
“Phytochemical analysis, antioxidant activity and toxicity evaluation of an extract from *Crataegus laciniata* fruits”

- **Benedetta Galletta**, Maria Fernanda Taviano, Federica Davi et al.  
“Phenolic content, antioxidant properties, and brine shrimp toxicity of wild *Hirschfeldia incana* (L.) Lagr.-Foss. from Sicily (Italy): comparative study of leaf, flower, and stem extracts”
- **Gianniantonio Domina**, Giulio Barone, Emilio Di Gristina  
“Giuseppe Pitre’s contribution to the ethnobotanical knowledge of Sicily”
- **Maria Vitiello**, Marinella De Leo, Vera M. S. Isca et al.  
“Skin-related bioactivity of *Tencrium flavum* subsp. *flavum* aligned with its ethnobotanical use”

13:05-14:00 Lunch break

## PARALLEL SESSIONS OF ORAL POSTER PRESENTATIONS

14:00-16:00 Oral poster presentations (2 + 1 minutes) in 3 parallel sessions

**Parallel session A** (Chairperson: Stefano Martellos): 1.1 Plant conservation, 1.2 Climate change, 1.5 Biological invasion, 1.7 Taxonomic advances, 1.8 Vegetation, 2.15 Vegetation resurvey, 1.9 Functional traits and Life strategies, 1.10 Agrobiodiversity, 1.11 Biodiversity informatics

**Parallel session B** (Chairperson: Roberto Venanzoni): 1.11 Biodiversity informatics, 2.1 Bioindicators, 2.2 Natura 2000 Network, 2.3 EEC 42/93 Habitat Directive, 2.4 Plant and community dynamics, 2.6 Habitat restoration, 2.7 Conservation priorities and Habitat assessments, 2.9 Field and remote monitoring, 2.10 Floristic knowledge, 2.12 Monumental trees, 2.13 Old growth forests, 2.18 Forest ecology and management

**Parallel session C** (Chairperson: Silvia Mazzuca): 2.14 Palynology, 3.6 Competition, 3.9 Plant–soil feedback, 4.4 Stress responses, 4.5 Plant growth, 4.15 Conservation genomics, 5.2 Plant products, 5.4 Medicinal plants, 5.6 Cultural heritage, 5.7 Phytochemistry, 5.8 Plant metabolites, 5.13 Pharmacognosy, 5.15 Crop Wild Relatives, 5.16 Agroecology

16:00-16:30 Coffee Break

16:30 **Italian Botanical Society awards**

16:45 **Introduction to the field trip**

17:00                    **Congress Closure**

**Saturday, 5th September 2026**

**Post-Congress Event**

07:30-16:30    Field trip in the Aspromonte National Park

## List of posters

### PARALLEL SESSION A (Chairperson: S. Martellos)

#### 1.1 Plant conservation

Anna Corli, Aurora Panizza,  
Simone Orsenigo, Silvano Lodetti,  
Graziano Rossi, Margherita  
Tognola

Managing wet meadows for conservation:  
the case of *Marsilea quadrifolia* L. in a  
Natura 2000 site (N Italy)

Giuseppe Emma, Agata Irene Di  
Paola, Giuseppe Puglia, Greg  
Walter, Antonia Cristaudo

Harnessing among-population variation  
to improve conservation of *Silene bicesiae*  
(Brullo & Signor.): implications for  
adaptive resilience

Marta Pianta, Elena Mora, Mauro  
Mariotti, Giulia Bianchi, Emanuele  
Raso, Enrica Roccatiello

The new Cinque Terre Botanical Garden:  
a conservation project that brings the  
natural environment and land use into  
harmony

Giovanna Potenza, Simonetta  
Fascetti, Domenico Puntillo,  
Michele Colangelo, Antonio  
Lapolla, Francesco Ripullone

S.M.A.R.T. lichen biota indicators for old-  
growth forests in the Southern Apennines:  
*Lobaria pulmonaria* (L.) Hoffm. and  
*Lethariella intricata* (Moris.) Krog

Paula Ros, Maraeva Gianella,  
Alasia Maria Gastaud, Martino  
Adamo, Jérôme Forêt, Rolland  
Douzet, Marco Mucciarelli, Maria  
Consolata Siniscalco, Tiziana Ulian

A harmonized transboundary floristic  
database connecting biodiversity  
conservation and people in the  
ALCOTRA region

#### 1.2 Climate change

Francesco Carlomagno, Teresa  
Bonacci, Giuseppe Pellegrino

Effects of simulated rainfall regimes on  
fruit set and seed viability in *Anacamptis*  
*morio*, *Dactylorhiza sambucina* and *Orchis*  
*mascula* under climate change scenarios

Stafania Previti, Valentina Lucia  
Astrid Laface, Carmelo Maria  
Musarella, Giovanni Spampinato

Ecosystem services of urban green spaces:  
the case study of the “Umberto I”  
Municipal Villa in Reggio Calabria  
(Calabria, Southern Italy)

## 1.5 Biological invasion

Andrea Capuano, Annalisa Santangelo, Sandro Strumia, Gabrielle Thiebaut, Corentin Gaudichet

Ecological impacts and competitive interactions of *Ludwigia hexapetala* in freshwater ecosystems

Solveig Tosi, Lidia Nicola, Paola Nola

The soil mycobiome in a Strict Nature Reserve threatened by invasive species *Ailanthus altissima* (Simaroubaceae)

## 1.7 Taxonomic advances

Giancarlo Angeles Flores, Paola Angelini, Gaia Cusumano, Claudia Riccioni, Beatrice Belfiori, Giovanni Galeotti, Paolo di Dio, Roberto Venanzoni, Andrea Rubini

New data on taxonomic delimitation in the genus *Russula*

Valerio Avola, Marina Morabito, Line Le Gall, Antonio Manghisi

Scientific expeditions, biodiversity assessment and integrated taxonomy: The case study of the Halymeniaceae (Rhodophyta) collected during the Atimovata Expedition in southern Madagascar

Francesco Dovana, Giuliano Ferisin

Integrative taxonomy of the genus *Pluteus* in northeastern Italy

Jacopo Franzoni, Fabrizio Bartolucci, Fabio Conti, Domenico Gargano, Duilio Iamonico, Gianluca Nicoletta, Manuel Tiburtini, Lorenzo Peruzzi

Preliminary systematic results on the *Dianthus balbisii* complex (Caryophyllaceae) in the central Mediterranean

Francesca Manconi, Fabrizio Bartolucci, Francesco Roma Marzio, Lorenzo Peruzzi

A cytosystematic study of *Polygala nicaeensis* and related taxa (Polygalaceae)

Pasquale Marino, Vivienne Spadaro, Francesco M. Raimondo

Biodiversity and new findings on the taxonomy of Sicilian populations of the genus *Pyrus* (Rosaceae)

Mattia Pallanza, Bruno Foggi, Petr Šmarda, Petra Šarhanová, Iryna Bednarska, Simone Orsenigo

An overview of the *Festuca stricta-valesiaca* complex in Italy: current criticalities and future prospects

Lorenzo Peruzzi, Jacopo Franzoni, Antonio Giacò, Martino Adamo, Gianluigi Bacchetta, Simonetta Bagella, Giuseppina Barberis, Giulio Barone, Fabrizio Bartolucci, Liliana Bernardo, Luana Bertolotti, Daniela Bouvet, Salvatore Cambria, Giacomo Calvia, Angelino Carta, Fabio Conti, Diana Maria Cruz Tejada, Marco D'Antraccoli, Davide Dagnino, Emanuele Del Guacchio, Domenico Gargano, Maria Guerrina, Duilio Iamónico, Lorenzo Lastrucci, Daniela Longo, Danilo Monari, Carmelo Maria Musarella, Mauro Ottonello, Nicodemo Giuseppe Passalacqua, Simonetta Peccenini, Enrico Vito Perrino, Giovanni Riviaccio, Maria Consolata Siniscalco, Giovanni Spampinato, Adriano Stinca, Daniele Viciani, Robert Philipp Wagensommer, Giannantonio Domina

Applying Turrill's Omega Index to selected endemics: A pilot project for innovative conservation of the Italian flora

Manuel Tiburtini, Jacopo Franzoni, Fabrizio Bartolucci, Lorenzo Peruzzi

How many subspecies can we distinguish with *Polygala alpestris* (Polygalaceae)? Evidence from an integrative taxonomic approach

Rosario Ennio Turrisi, Emilia Poli Marchese

*Chamaenerion dodonaei* on the Etna Mount

## 1.8 Vegetation

Marcello Conte, Roberto Venanzoni

The “Ballene”: a distinctive natural feature of Lake Fondi (Lazio, Italy)



Alessia Cozzolino, Giuliano Bonanomi, Riccardo Motti

The Role of Stone Materials, Environmental Factors, and Management Practices in Vascular Plant-Induced Deterioration: Case Studies from Pompeii, Herculaneum, Paestum, and Velia Archaeological Parks (Italy)

Norma Yolanda Ochoa-Ramos, Giovanni Breogan Ferreiro-Lera, Alejandro González-Pérez, Aitor Álvarez-Santacoloma, Ángel Penas, Sara del Río

A theoretical framework for vegetation classification and bioclimatic correlation in western Mexico

Alexandros Stafylarakis, Maria Panitsa, Olga Tzortzakaki, Sinos Giokas, Konstantina Zografou, George C. Adamidis

Shifts in plant diversity and leaf damage occurrence across an urbanization gradient: Ten years later

## 2.15 Vegetation resurvey

Giulia Santunione, Fabrizio Buldrini, Elisabetta Sgarbi

Forty years of floristic change in the Reggio Emilia lowlands

## 1.9 Functional traits and Life strategies

Eleonore Cinti, Andrea Carli, Mauro Centritto, Giulia Atzori, Diana Zuluaga, Matthew Haworth, Lara Reale

Evolution of stomatal and mesophyll coordination during wheat domestication

Pietro Furnari, Sara Delfino, Daniele Torre, Patrizia Trifilò

Dynamics of leaf minimum conductance during dehydration in Mediterranean species

Emma Tedeschini, Eleonore Cinti, Daniela Farinelli, Lara Reale

Life strategies in *Corylus avellana* L.: ultrastructural analysis and evolutionary implications of floral plasticity in the face of climate change

## 1.10 Agrobiodiversity

Davide Pedrali, Alex Alberto, Luca Giupponi, Riccardo Panza, Filippo Guerra, Annamaria Giorgi

Characterization and future distribution prospects of the “Carciofo di Malegno” landrace (*Cynara cardunculus* subsp. *scolymus* (L.) Hayek) for its *in situ* conservation

## 1.11 Biodiversity informatics

Vanessa Bruzzaniti, Alessandro Chiarucci

The development and current structure of AMS-VegBank, a major Vegetation Plot Databases

## **PARALLEL SESSION B** (Chairperson: R. Venanzoni)

### **1.11 Biodiversity informatics**

Jessica Frigerio, Andrea Galimberti, Matteo Montagna, Iole Di Capua, Leonardo Dapporto, Irene Pellegrino, Alex Laini, Chiara Manfrin, Andrea Desiderato, Laura Garzoli, Simona Armeli Minicante

The Italian National Node of DNA Barcoding – ItaBOL

### **2.1 Bioindicators**

Riccardo Fedeli, Tiberio Fiaschi, Giovanni Terranova, Andrea Benocci, Linda Seggi, Stefano Martellos, Annalisa Falace, Claudia Angiolini, Stefano Loppi

A 250-year record of environmental change revealed by non-destructive XRF multi-element analysis of historical Bartalini's herbarium (18<sup>th</sup> century)

Gilda Perri, Ilaria Fuoco, Carmine Apollaro, Andrea Bloise, Giovanni Vespasiano, Domenico Gargano

Species-specific patterns of metal accumulation in plants from the Macariace mine area (Southern Italy)

Federico Selvi, Elisa Carrari, Cristina Gasperini, Giovanni Iacopetti, Ilaria Santi

Towards an integrated checklist and forest affinity assessment of the Italian woodland flora

Adriano Stinca, Giuseppe Bazan, Salvatore Cambria, Gennaro Domenico Cennamo, Giampiero Ciaschetti, Giovanni Lorenzo Della Gatta, Martina Dentato, Antonio Esposito, Roberto Ferro, Giuseppina Fusco, Giuseppe Longo, Steve Longoni, Giovanna Marchese, Pietro Minissale, Fabio Mondello, Marina Morabito, Franca Munno, Carmelo Maria Musarella, Enrico Vito Perrino, Federica Pinto, Lorenzo Pinzani, Alessia Postiglione, Maria Ravo, Giovanni Salerno, Gianmarco Tavilla, Marco Varricchione, Roberto Vetromile, Daniele Viciani, Gabriele Galasso

Vascular plants as bioindicators: temporal floristic changes (1988–2026) in the “I Variconi” wetland (Southern Italy)

## 2.2 Natura 2000 Network

Ilaria Nusco, Fabio Mondello,  
Antonio Manghisi, Salvatore  
Giacobbe, Marina Morabito

DNA barcoding as a tool to help unravel the complex taxonomy of *Ruppia* spp. in the Oriented Nature Reserve “Laghetti di Marinello”, Northern Sicily (Italy)

## 2.3 EEC 42/93 Habitat Directive

Giuseppe Longo, Valeria  
Tomaselli, Giulia Conversa, Paolo  
La Rotonda, Enrico Vito Perrino

Preliminary results on vegetation dominated by *Salicornia* sp. in the Gargano coast (Puglia, Italy)

## 2.4 Plant and community dynamics

Enrico Bajona, Daniel Dite,  
Michal Hájek, Petra Hájková,  
Borja Jiménez-Alfaro, Giulio  
Pandeli, Raimondo Pardi, Aaron  
Pérez-Haase, Alessandro Petraglia,  
Safiya Praleskouskaya, Giuseppe  
Venturella, Emilio Di Gristina

Contribution to the knowledge of alkaline fen vegetation (*Caricion davallianae*) in the northern, central, southern Apennines: diversity and ecology at the southern limit of European distribution

Giandiego Campetella, Luciano  
Ludovico Maria de Benedictis,  
Stefano Chelli, Marco Cervellini,  
Maura Francioni, Chiara Scalet,  
Roberto Canullo

Beech Forest dynamics and plant diversity: insights from different methodological approaches

Davide Casalino, Adele Benassi,  
Chiara Bonifazio, Maria Guerrina,  
Chiara Macolino, Frederic Medail,  
Luigi Minuto, Ivano Rellini,  
Gabriele Casazza

Overview on serpentinophyte flora in the Mediterranean Basin biodiversity hotspot

Mario Di Stefano, Giuseppe Diego  
Puglia, Antonia Cristaudo

Divergent dormancy cycling dynamics in plant communities of Mediterranean temporary ponds

## 2.6 Habitat restoration

Roberto Venanzoni, Paola  
Angelini, Giampiero Ciaschetti,  
Corrado Marcenò, Fabio Maneli

Restoration of Annex I Habitat 7230 “Alkaline fens” Carried out within the LIFE IMAGINE Project (LIFE19 IPE/IT/000015 “Integrated Management and Grant Investments for the Natura 2000 Network in Umbria–Italy”): 2026 activities

Mariacristina Villani, Federico Vianello, Roberto Fiorentin, Alessandro Gianolla, Renato Rosa, Giorgio Ziron

Restoration of habitat 6210 in the Euganean Hills (Northern Italy): 4 years of activities

## **2.7 Conservation priorities and Habitat assessments**

Leonardo Beccarisi, Valeria Tomaselli

Assessing the conservation status of coastal dune systems under the EU Habitats Directive using a dual-index approach: a Mediterranean study case

## **2.9 Field and remote monitoring**

Giovanni Oliveri, Antonino Maltese, Andrea Laschi, Donato Salvatore La Mela Veca

Post-Fire Vegetation Analysis: A Google Earth Engine workflow integrating Sentinel-2 time series and ecological layers

Maura Francioni, Marco Cervellini, Giandiego Campetella, Chiara Scalet, Stefano Chelli, Alessandro Chiarucci, Arianna Ferrara, Federico Selvi, Ilaria Santi, Giancarlo Papitto, Roberto Canullo

INFI 2025: A Strategic Tool for Forest Biodiversity Research and Conservation

Arianna Ferrara, Giandiego Campetella, Roberto Canullo, Marco Cervellini, Stefano Chelli, Jacopo Iaria, Alessandro Chiarucci

Data validation of botanical field surveys: an R Shiny tool for the New Italian National Forest Inventory (INFI 2025)

Ilaria Santi, Roberto Canullo, Marco Cervellini, Giandiego Campetella, Stefano Chelli, Federico Selvi

Assessing the field protocol implementation for understory plant functional groups monitoring within the Italian National Forest Inventory

Marco Cervellini, Luciano Ludovico Maria De Benedictis, Leonardo Salvatori, Stefano Chelli, Giandiego Campetella, Federico Selvi, Giovanni Iacopetti, Arianna Ferrara, Alessandro Chiarucci, Antonella Canini, Maura Francioni, Chiara Scalet, Roberto Canullo

Training and intercalibration reduce observer-induced variability in forest vegetation surveys

Valentina Verducci, Jessica Frigerio,  
Giorgia Spandri, Vanessa Lozano,  
Thomas Abeli, Sabrina Giannetto,  
Giuseppe Brundu, Donatella  
Spano, Cristiano Rosa, Luca  
Palezza, Thanapol Tantagunninatt,  
Massimo Labra

Faster Detection, Better Decisions:  
eDNA-to-LAMP Monitoring for Invasive  
Species and Critically Endangered Plants

## 2.10 Floristic knowledge

Claudio Marici, Salvatore Cambria,  
Gianpietro Giusso del Galdo

Tree diversity of Sicily: A unique forest  
heritage

Fabio Mondello, Antonio  
Manghisi, Marina Morabito

Observations on the populations of *Pinus  
pine* in the Messina area (Sicily, Italy)

Lara A. Quaglini, Enrico Banfi,  
Gabriele Galasso

Urban biodiversity in a post-industrial  
landscape: floristic characterization of *La  
Gocia* (Milan, Italy)

Luigi Torino, Valentina Lucia  
Astrid Laface

Updated checklist of Orchidaceae family  
of the metropolitan city of Reggio Calabria  
(Southern Italy): Distribution, habitat and  
conservation

Flavia Bartoli, Zhoreh Hosseini,  
Giulia Caneva

Floristic Assessment of the Historic  
Gardens of the Basilicata Region:  
Revealing, Conserving, and Valuing  
Botanical Memory

Irene Ventura, Diego Orazi,  
Tiziana Lombardi

Coastal wetland flora as a tool for habitat  
assessment and conservation: The case of  
the Lame and Colmate del bozzone areas  
(Tuscany, Italy)

## 2.12 Monumental trees

Emilia Poli Marchese, Rosario  
Ennio Turrisi

The oldest monumental tree of Mount  
Etna: "The chestnut of hundred horses"

Giovanni Spampinato, Antonino  
Morabito, Arcangelo Franco  
Giampà, Carmelo Maria Musarella

A project for the conservation and  
sustainable enhancement of the  
monumental Oriental Plane Tree in  
Curinga (Calabria, Italy)

## 2.13 Old growth forests

Elisa Carrari, Federico Selvi,  
Marco Cabrucci

Towards the old-growth forests Italian  
network: structural heterogeneity and  
plant diversity in novel candidate sites of  
Tuscany

Mattia Letizia Marino, Maria  
Giovanna Dia, Patrizia Campisi,  
Giuseppe Venturella

Bryophyte community composition and  
structure in a *Quercus pubescens sensu lato*  
forest with old-growth traits in west-  
central Sicily

## 2.18 Forest ecology and management

Iduna Arduini, Riccardo Lenci,  
Silvia Pampana

Do gap dynamics really work for forest  
conservation and tree recruitment?

Kevin Garofalo, Lorenzo Di  
Marco, Giuseppe Pignatti, Aldo  
Schettino, Umberto Malagrino,  
Giuseppe Oliva, Adriana A.C.  
Chiappetta, Innocenzo Muzzalupo

Mycorrhization of Bosnian Pine with  
Calabrian Truffles: Preliminary Nursery  
Results for the Development of Managed  
Truffle Plantations

Sonia Ravera, Claudia Cocozza,  
Francesco Parisi, Davide  
Travaglini

Forest composition and structural  
heterogeneity drive epiphytic lichen  
diversity in the Vallombrosa forests  
(Tuscany, Central Italy)

## PARALLEL SESSION C (Chairperson: S. Mazzuca)

### 2.14 Palynology

Denise De Franco, Alessandro  
Travaglini, Maria Antonia  
Brighetti, Alessandro Di Menno di  
Bucchianico

*Back-trajectories*: a factor in the long-  
distance transport of pollen and in hay  
fever

Martina Denami, Jessica Zappa,  
Eleonora Rattighieri, Anna Maria  
Mercuri

Characterisation of Calabrian honeys and  
investigation of the regional melliferous  
flora: insights from a two years  
melissopalynological study

Alessandro Di Menno di  
Bucchianico, Silvia Brini, Raffaella  
Gaddi, Maria Antonia Brighetti,  
Denise De Franco, Alessandro  
Travaglini, the VeBS study team

Evolution of urban vegetation and  
airborne pollen concentrations in Rome: a  
21-year longitudinal study

Daniil Gornov, Eleonora Clò,  
Assunta Florenzano, Francesco  
Salvatori, Anna Maria Mercuri

Experimental forensic palynology:  
attachment of pollen to some different  
types of materials

Alessia Masi, Lucrezia Masci,  
Georgios C. Liakopoulos, Laura  
Sadori, Cristiano Vignola, Adam  
Izdebski

A high-resolution multiproxy record from  
Lake Dojran reveals human dynamics and  
environmental changes in the Central  
Balkans over the last 2500 years

Alessandro Travaglini, Denise De Franco, Maria Antonia Brighetti, Alessandro Di Menno di Buchianico

30 years of activity at the Rome Tor Vergata Monitoring Centre: reflections on methodology based on experience

### 3.6 Competition

Evangelia Tsovoli, Panayiotis G. Dimitrakopoulos, George C. Adamidis

Investigation of the allelopathy of the hyperaccumulator species *Odontarrhena lesbiaca* on five plant species

### 3.9 Plant–soil feedback

Federica Pinto, Carlo Antonio Barretta, Alberto Palomba, Antonio Pietro Garonna, Gennaro Di Prisco, Paola Viola, Maria Ravo, Angela Cordella, Adriano Stinca

Does less intensive mowing of urban lawns increase biodiversity and soil fertility while also saving money and energy? An Italian project will answer this question

### 4.4 Stress responses

Christiana Charalampidi, Alexandros Kollias, Antonios Augustinos, Viola Petropoulou

Probing photosynthetic efficiency through *in vivo* chlorophyll fluorescence in the nickel-hyperaccumulators *Bornmuellera emarginata* and *Bornmuellera tymphaea* growing on serpentine and non-serpentine substrates

Matilde Costa, Alice Peduzzi, Diego Piacentini, Maria Maddalena Altamura, Giuseppina Falasca

Characterization of drought stress response at early plant development stages in *Panicum miliaceum* and *Pennisetum glaucum*

Alessia D'Agostino, Gerardo Pepe, Gabriele Di Marco, Antonella Canini, Angelo Gismondi

Gallic acid-induced transcriptomic reprogramming enhances drought tolerance in *Mentha spicata* L.

Sara De Francesco, Chiara Amitrano, Antonio Pannico, Carmen Arena, Marco Durante, Mariagabriella Pugliese, Rosanna Caputo, Stefania De Pascale, Marta Del Bianco, Veronica De Micco

Effects of X-Ray Seed Priming on Germination, Seedling Growth and Antioxidant Responses in Candidate Crops for Lunar Agriculture

Alexandros Kollias, Christiana Charalampidi, Antonios Augustinos, Viola Petropoulou

Comparison of growth characteristics and photosynthetic pigment profile in two Ni-hyperaccumulator species grown on serpentine and non-serpentine soil: the effect of macronutrient supplementation

Francesca Lanni, Diego Piacentini,  
Matilde Costa, Maria Maddalena  
Altamura, Giuseppina Falasca,  
Laura Fattorini

Rocco Placi, Francesco Rizzi,  
Francesco Nicassio, Giovanni  
Marsella, Alfonso Maffezzoli,  
Marcello Salvatore Lenucci

Amina Tahiri, Alessia D'Agostino,  
Gabriele Di Marco, Antonella  
Canini, Angelo Gismondi

Morphological responses of two rice  
genotypes to inorganic arsenic and the  
protective role of the synthetic  
strigolactone analogue GR24

Stimulus-specific mechanotransduction in  
*Arabidopsis thaliana* (L.) Heynh.: Integrating  
vibrational signal properties with morphological,  
biochemical, and transcriptomic responses

Rooting for resilience: microRNA  
regulation of flavonols and auxin  
dynamics in *Triticum aestivum* L. under heat  
stress

## 4.5 Plant growth

Vlad Sebastian Popescu, Silvia  
Bignetti, Silvia Traversari, Daniele  
Tregambe, Andrea Mastinu

Towards lunar regolith-based growing  
media: preliminary responses of edible  
crops to mare and highland simulants

## 4.15 Conservation genomics

Antonio Alecci, Paola Frazzetto,  
Marianna Zimbone, Carlo Maria  
Cacice, Lorenzo Pin, Giuseppe  
Diego Puglia

A novel ONT-based sequencing approach  
for genetic diversity assessment to support  
ecological restoration: insights from the  
REGARD project

## 5.2 Plant products

Fabiana Antognoni, Karina B.  
Ruiz, Chiara Fanciaresi, Paolo Lo  
Meo, Silvia Pieraccini, Susanna  
Guernelli

Cyclodextrin nanoformulations improve  
the biological activity of rosmarinic acid in  
plant growth assays

## 5.4 Medicinal plants

Donata Condorelli, Simone  
Bianchi, Claudia Di Giacomo,  
Manuel Minerba, Arianna Tomasi,  
Vivienne Spadaro, Francesco  
Maria Raimondo, Rosaria  
Acquaviva, Giuseppe Antonio  
Malfa

Phytochemical Characterization and  
Biological Potential of *Psidium guajava* Leaf  
Extract: An Optimized Approach

Gaia Cusumano, Agnese Bertoldi,  
Eleonora Calzoni, Husam B. R.  
Alabed, Laura Dorina Dinu,  
Emanuel Vamanu, Florentina

*Rosa canina*-Derived Nanovesicles as a  
Novel Source of Bioactive Compounds  
with Antioxidant and Anti-Inflammatory  
Potential



Matei, Gokhan Zengin, Carla Emiliani

Giulia Menzio, Arianna Marengo, Cecilia Cagliero, Barbara Sgorbini, Cinzia Sanna, Beatriz de la Fuente Miguel, Valentina Garavito, Marta Arroyo, Patrizia Rubiolo

Vincenzo Musolino, Antonio Cardamone, Anna Rita Coppoletta, Francesca Lorenzo, Luigi Tucci, Carmine Lupia, Cristina Carresi, Mariangela Marrelli, Micaela Gliozzi, Vincenzo Mollace

Fatima Zahrae Redouan, Alessandro Crisafulli, Piergiorgio Cameriere, Abderrahmane Merzouki

## 5.6 Cultural heritage

Laura Bonfanti, Lorenzo Cecchi, Lorenzo Lastrucci, Lorella dell'Olmo, Daniele Viciani

Carmelo Maria Musarella, Domenica Macri, Miriam Patti, Valentina Lucia Astrid Laface, Enrico Tromba, Giovanni Spampinato

## 5.7 Phytochemistry

Francesca Vidotto, Giorgio Cappellucci, Abir Arfaoui, Stefano Loppi, Guido Flamini, Elisabetta Miraldi, Riccardo Fedeli, Giulia Baini

## 5.8 Plant metabolites

Emma B. Croce, Giada Brizzi, Fabio Vaiano, Cristina Gonnelli, Davide Bacherini, Nadia Bazilhezina, Piero Bruschi

Simona Trincia, Redouan Adam Anaia, Jundong Huang, Johan Hekelaar, Kira J. Tiedge

Biological Activity of Three Endemic Medicinal Plant Extracts after Simulated Gastrointestinal Digestion

Phytochemical analysis, antioxidant and *in vitro* hepatoprotective activities of a polyphenol-rich fraction from the peel of *Citrus lumia* Risso (Rutaceae)

Ethnomedicinal plants used in the treatment of skin diseases and cosmetics in Northern Morocco and knowledge comparison from the 12th century

The Geography of 18th-Century Tuscany through Pier Antonio Micheli's manuscripts

Traditional Plant Uses in the Territory of Cardeto (Calabria, Southern Italy)

Characterization and valorization of spent coffee grounds as soil amendments: effects on the phytochemical and mineral composition of *Ocimum basilicum* L.

*Leonotis leonurus* (L.) R. Br. and *Leonurus japonicus* Houtt.: quantification of leonurine in non-stressed and salt stressed plants

Triterpenoid saponins potentially contribute to salt-induced ion responses in *Medicago sativa* L. cv "GIULIA"

### 5.13 Pharmacognosy

Elisa Berselli, Sofia Montagna,  
Francesca Coluccia, Gabriele  
Costantino, Giannamaria  
Annunziato, Paolo Governa,  
Marco Pieroni, Marco Biagi

Antioxidant and anti-inflammatory  
properties of propolis in cell free test and  
on human gastric adenocarcinoma cell line  
(AGS)

### 5.15 Crop Wild Relatives

Giulio Barone, Gianniantonio  
Domina

Traditional agricultural heritage  
landscapes as potential reservoirs of Crop  
Wild Relatives: A preliminary  
methodological approach

### 5.16 Agroecology

Flavio Polito, Paola Malaspina,  
Annarita La Neve, Laura Cornara,  
Domenico Trombetta, Vincenzo  
De Feo, Antonella Smeriglio

Valorization of by-products of *Laurus  
nobilis* L. and *Myrtus communis* L. for  
applications in organic farming

