

Under the Auspices of H.E.
the President of the Hellenic Republic
Mr. Prokopios Pavlopoulos

ABSTRACTS



XVI OPTIMA Meeting



Organized by:

OPTIMA (Organization
for the Phyto-Taxonomic
Investigation of the
Mediterranean Area)

Agricultural University
of Athens

2-5 October 2019
Agricultural University of Athens, Greece

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Abstracts

Oral Presentations, E-posters

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Scientific Programme

Tuesday, 1 October 2019

10.30 Meetings of the OPTIMA Commissions (restricted).

Wednesday, 2 October 2019

9.30 Meetings of Executive Council & International Board of OPTIMA

9.30 **Registration of the participants.** The Registration desk will remain open as per official programme timings throughout the entire meeting.

11.30 **Opening Ceremony and Plenary Lecture**

Dimitrios Phitos

The evolutionary course of Botanical science in Greece from Theophrastus to the present day.

13.00 **Welcome lunch**

Symposium 1 - Hall 1

Geoparks and Protected areas of Greece

Organizers: Georgia Kamari & Nikolaos Zouros

14.30 **Zouros N.** (Keynote presentation): The Global Geoparks Network.
Fassoulas Ch., Pattakos D. & Perakis E.: The Cretan Geoparks, synergies and actions for local sustainable development.
Liapi E. & Iliopoulos G.: The paleoflora of Chelmos-Vouraikos Unesco Global Geopark: A geological and palaeobotanical heritage.

Coffee break

Kontaxi Ch., Dalaka A. & Alvanopoulos G.: Protection and management of natural environment in Greece.

Kamari G., Mitsainas G. & Xanthakis M.: A successful example in the management of protected areas in Greece: The National Park of Mt. Aenos.

Phitos D., Kamari G. & Bareka P.: Red Data Books as valuable tools for the conservation of plant biodiversity in Protected Areas.

Symposium 2 – Hall 2

Fungal diversity in the Mediterranean area: recent advances and future prospects

Organizers: Giuseppe Venturella & George Zervakis

- 14.30 **Mello A.** (invited lecture): Advances in the identification of ectomycorrhizal fungi - insights on their biological and ecological aspect.
Zambonelli A., Iotti M. & Hall I. (invited lecture): Diversity of the genus *Tuber* in the wider Mediterranean Area and prospects for the commercial exploitation of selected truffle species.
Venturella G., Ferraro V. & Gargano M. L.: Biodiversity, conservation and exploitation of medicinal mushrooms in Italy.
- Coffee break**
- Lewinsohn D.:** The unique mycobiota of the Negev desert in Israel.
Leonardi M., Comandini O. & Rinaldi A. C.: *Halimium* and associated mycobionts: a new look at Mediterranean ectomycorrhizal communities.
Polemis E., Daskalopoulos V., Fryssouli V. & Zervakis G. I.: Inventory of macrofungi associated with *Alnus glutinosa* (priority habitat 91E0) from Andros island, Greece.
- Discussion**
DIRFIS MUSHROOMS: Let's taste the mushroom diversity.

Symposium 13 – Hall 3

Advances in lichen diversity in the Mediterranean region

Organizer: Ana Rosa Burgaz

- 14.30 **Guttová A., Slovák M., Kučera J., Senko D., Vďačný P., Zozomová-Lihová J., Melichárková A. & Fačkovcová Z.:** Revealing evolution, biogeography and ecology of Mediterranean centred genus *Solenopsora*: An integrative approach.
Burgaz A. R., Gutiérrez-Larruga B., Rodríguez-Arribas C. & Pino-Bodas R.: The genus *Cladonia* in Greece.
Llop E.: Lichen diversity from the Sicoric territory, continental Western Mediterranean region.
- Coffee break**
- Sohrabi M.:** Iranian Lichenology: Progress and Problems.
Pino-Bodas R., Gargiulo R., Cano E. & Burgaz A. R.: Assessing the genome wide RAD sequencing method to address the species delimitation in the genus *Cladonia* (*Cladoniaceae*, *Ascomycota*).

- 18.00 **Welcome Cocktail**

Thursday, 3 October 2019

Symposium 3 – Hall 1

History of early botanical exploration in the Mediterranean

Organizers: Werner Greuter & Vernon H. Heywood

- 9.30 **Bueno A. G. & Heywood V. H.:** Early botanical exploration of Spain.
Valdés Castrillón B.: Early botanical exploration of the Maghreb countries.
Raimondo F. M., Camarda I. & Lucchese F.: Early botanical exploration of Italy.
- Coffee break*
- Lack W. H.:** Early botanical exploration of the southern Balkans, Anatolia, and Caucasia.
Al-Zein M.: Early botanical exploration of the Levant and Egypt.
Leschner H.: The Big Bang - botanical investigation of the Middle East during 1900-1960.

Symposium 6 – Hall 2

Mediterranean algal diversity: Past, Present and Future

Organizers: Anna Maria Mannino & Sotiris Orfanidis

- 9:30 **Boudouresque C.-F., Blanfuné A., Perret-Boudouresque M., Ruitton S. & Thibaut Th.:** Extinction of Mediterranean macrophyte taxa: local extinctions and functional extinctions matter.
Rodríguez-Prieto C.: Past, present and future of Gigartinales and Cryptonemiales *sensu lato*.
Rindi F.: Diversity of Mediterranean coralline algae: recent advancements in the knowledge of a highly threatened group of seaweeds.
- Coffee break*
- Panayotidis P. & Tsiamis K.:** Diversity and ecology of macroalgae in Eastern Mediterranean.
Kooistra W. H. C. F., Gaonkar C. C., Montresor M., Piredda R., Sarno D. & Zingone A.: Species diversity and seasonality in the marine planktonic diatom *Chaetoceros* assessed by means of metabarcoding.

- 12.30 **Light lunch**

Symposium 5 – Hall 1

Plant diversity and evolution in polyploid, dysploid, and hybrid complexes of the Mediterranean flora

Organizers: Lorenzo Peruzzi & Sonja Siljak-Yakovlev

14.00

Introduction

Nemati Z., Harpke D. & Blattner F. R.: Greece, Home of Saffron – Progenitor, areas and consequences of triploidy.

Astuti G., Liu L., Coppi A. & Peruzzi L.: Different chromosome numbers, but slight morphological differentiation and genetic admixture among populations of *Pulmonaria hirta* complex.

Coffee break

Farhat P., Bou Dagher - Kharrat M., Adams R., Thierry R. & Siljak-Yakovlev S.: Polyploidy and hybridization as the main evolutionary driving forces of *Juniperus sabina* in its Mediterranean range.

Peterson A. & Harpke D.: The Mediterranean basin as secondary speciation centre of *Gagea*.

Nardi F. D., Alonso-Marcos H., Hülber K., Tribsch A. & Dobeš C.: How ploidy level and mating system influence the ecogeography of amphipomicitic *Potentilla puberula* (*Rosaceae*).

Symposium 4 – Hall 2

Origin and diversification of Mediterranean crops

Organizer: Benito Valdés Castrillón

14.00

Valdés Castrillón B.: Introduction

Weiss E.: Daniel Zohary

Plitman U. & Melamed Y.: The plausible roles of women in the domestication of lentils.

Coffee break

Weiss E.: The domestication of wheat and barley - new evidences.

Dimitrova D. & Ivanova T.: From crop fields to home gardens - transitions and identities.

Cermeño P.: New Mediterranean crops - aromatic plants.

Friday, 4 October 2019

Symposium 7 – Hall 1

New methods in Plant Systematics

Sponsored by: Plant Systematics & Evolution – Springer Link

Organizers: Karol Marhold & Christoph Oberprieler

9.30

Frajman B., Závěská E. & Schönswetter P.: Integrating next generation sequencing, ecological niche modelling and classical phylogenetic and morphometric methods disentangles relationships within Eurasian *Euphorbia seguieriana* alliance (*Euphorbiaceae*).

Tomasello S., Karbstein K., Hodač L., Pätzold C. & Hörandl E.: Resolving phylogenetic relationships in *Ranunculus auricomus* using target enrichment.

Liveri E., Crawl A. A., Mavrodiev E., Yildirim H., Kamari G., Phitos D. & Cellinese N.: Another piece of the puzzle, another brick in the wall: the inevitable fate of *Campanula* L. section *Quinqueloculares* Phitos.

Coffee break

Aydin Z. U., Dönmez A. A. & Koch M. A.: Efficiency of plant DNA barcoding for taxonomy: A case study in *Dianthus* L. (*Caryophyllaceae*).

Wagner F., Ott T., Schall M., Lautenschlager U., Vogt R. & Oberprieler C.: Taming the Red Bastards: Hybridisation and species delimitation in the *Rhodanthemum arundanum*-group (*Compositae, Anthemideae*).

D'Antraccoli M., Roma-Marzio F., Carta A. & Peruzzi L.: Patterns of floristic richness in the Euro-Mediterranean area.

Karbstein K., Tomasello S., Hodac L., Daubert M. & Hörandl E.: New approaches in TaxonOmics: RADseq supported by geometric morphometrics uncovers relationships of sexual species within the *Ranunculus auricomus* complex.

Symposium 8 – Hall 2

Useful Plants of the Mediterranean

Organizers: Kemal Hüsnü Can Baser & Stella Kokkini

9.30

Assimopoulou A.: Alkannins and Shikonins: From Ancient Codes to Modern Medicine.

Çalis I.: Recent Advances on the chemistry of *Astragalus* species of Turkey.

Pirintsos S.: Linking Biodiversity with Drug development in the framework of Ethnopharmacology: The experience of Cretan IAMA research group.

Coffee break

Polissiou M.: Essential oils from Mediterranean MAPs as potential biopesticides.

Tsimidou M.: The bioactive apocarotenoids of *Crocus sativus* L. and its wild Mediterranean allies.

12.30

Light lunch**E-Poster Session – Hall 3**

Organizers: Pepy Bareka & Giannantonio Domina

14.00

The posters will be at display throughout the entire Meeting.

19:30

Congress Dinner**Saturday, 5 October 2019****Symposium 9 – Hall 1****Islands and insular systems**

Organizers: Frédéric Médail & Panagiotis Trigas

9.30

Médail F. & Trigas P.: Introduction: Importance of Mediterranean islands for biogeography and conservation of plants.

Panitsa M., Kougioumoutzis K., Kagiampaki A., Triantis K. A. & Trigas P.: Plant diversity patterns in the Aegean Islands: history, climate or isolation?

Nikolić T.: The eastern Adriatic islands – state and perspectives.

Coffee break

Pasta S., La Rosa A., Pavon D., Lo Cascio P. & Médail F.: Tentamen Florae Aeolicae: A critical checklist of the vascular plants of the Aeolian Islands (Sicily, Italy).

Cambria S., Brullo S., Bogdanovic S. & Giusso del Galdo G.: Taxonomy and vicariance within the endemic species of *Solenopsis* (*Campanulaceae*) in the Mediterranean islands.

Kougioumoutzis K., Kokkoris G., Panitsa M., Strid A., Trigas P. & Dimopoulos P.: Climate change in a Mediterranean island biodiversity hotspot and its impact on the endemic Cretan flora.

Symposium 10 – Hall 2

Web Botany

Organizers: Ernst Vitek & Dimitris Koureas

- 9.30 **Koureas D.:** The Distributed System of Scientific Collections (DiSSCo) research infrastructure; Integrating European natural history collections to enable data-driven innovation and frontier biodiversity research.
- Raab-Straube E. von:** Euro+Med PlantBase and the Common Data Model (CDM) – integrating, further updating and expanding floristic and taxonomic information on Euro-Mediterranean plant diversity.
- Hofbauer M., Berger A., Gilli C., Lachmayer M., Prehlsler D., Reich D., Sander R., Sonnleitner M. & Gutermann W.:** Flora Ionica online – an integrative resource for plant biodiversity.
- Coffee break*
- Groom Q.:** Progress towards better management of and access to herbarium data.
- Dimopoulos P.:** The Flora of Greece website – FoG web.

12.30 **Light lunch**

Symposium 11 – Hall 1

Plant Conservation

Organizers: Magda Bou Dagher-Kharrat & Theophanis Constantinidis

- 13.30 **Véla E., Allen D., Barrios V., Lansdown R. & Numa C.:** Assessing the conservation status of Monocots in the Mediterranean region: reflections from a recent IUCN Red List evaluation.
- Dimopoulos P., Constantinidis Th., Raus Th. & Strid A.:** Taxonomic plant diversity and conservation needs in Greece.
- Lansdown R., Grillas P., Galewski Th. & Bazos I.:** Conservation of Mediterranean Wetland Plants.
- Peruzzi L., Astuti G., Carta A., D'Antraccoli M., Roma-Marzio F. & Bedini G.:** Interdisciplinary studies in plant conservation: lessons from some Italian case studies.
- Bou Dagher Kharrat M., Roukoz A., Depalle F., Samad N. A., Jardak R., Kahale R., Saliba C. & Sakr R.:** Conservation of endemic *Oncocyclus*, Iris of the eastern Mediterranean Region.

Coffee break

- Xu X., Ma K., Luo M., Liu B., Wang H., Xue J., Lin Q., Li W., Xu Z. & Ganeshaiyah K. N.**: Mapping Asia Plants: Initiative and Progress.
- de Montmollin B., Gotsiou P., Bacchetta G., Christodoulou Ch. S., Cogoni D., Fournaraki Ch., Giusso del Galdo G. P., Kokkinaki A., Kyratzis A., Piazza C., Vicens M. & Fenu G.**: Ex-situ and in-situ joint conservation actions for threatened Mediterranean island flora: lessons learnt from the CARE-MEDIFLORA project.
- Özhatay F. N., Demirci Kayıran S. & Kaya E.**: Conservation of endemic *Colchicum* species distributed in the Mediterranean Region of Turkey.
- Lazaridi E., Thanopoulos R. & Bebeli P. I.**: On-farm conservation impact on cowpea diversity in Greece.

Symposium 12 – Hall 2

Invasive plants: botanical gardens, orchards, crops and aquatic habitats as hotspots of spreading the alien species in the Mediterranean

Organizers: Stephen L. Jury & Olja Vasić

- 13.30 ***Tanner R.***: Mitigating the impacts of invasive alien plants through international cooperation.
- Mannino A. M.***: Alien macrophytes in the Mediterranean sea: an overview.
- Papini A. & Santosuosso U.***: Modelling the center of origin and the spreading pattern of *Caulerpa* invasion in the Mediterranean.
- Farelo P., Gómez-Bellver C., Montserrat J. M., Pyke S., López-Pujol J., Nualart N. & Ibáñez N.***: Montjuïc Mountain (Barcelona): A hotspot for plant invasions in a Mediterranean city.

Coffee break

- Del Guacchio E.***: The role of the botanical gardens of Campania (Italy) in introducing invasive plants.
- Jury S. L.***: *Nicotiana glauca*: a neglected invasive?
- Herrando-Moraira S., Viales D., Nualart N., Gómez-Bellver C., Ibáñez N., Massó S., Cachón-Ferrero P., González-Gutiérrez P. A., Herrera I., Shaw D., Stinca A., Wang Z. & López-Pujol J.***: From greenhouse to the wildlife: global invasion patterns of *Kalanchoe ×houghtonii* (Crassulaceae).

- 17:00 **Closing Ceremony and General Meeting of OPTIMA**

Sunday, 6 October 2019

Field Excursion

Oral Presentations

SYMPOSIUM 1

Geoparks and Protected areas of Greece

Organisers: *Georgia Kamari & Nikolaos Zouros*

Programme

- 1) **Zouros N.** (*Keynote presentation*): The Global Geoparks Network.
- 2) **Fassoulas Ch., Pattakos D. & Perakis E.**: The Cretan Geoparks, synergies and actions for local sustainable development.
- 3) **Liapi E. & Iliopoulos G.**: The paleoflora of Chelmos-Vouraikos Unesco Global Geopark: A geological and palaeobotanical heritage.
- 4) **Kontaxi Ch., Dalaka A. & Alvanopoulos G.**: Protection and management of natural environment in Greece.
- 5) **Kamari G., Mitsainas G. & Xanthakis M.**: A successful example in the management of protected areas in Greece: The National Park of Mt. Aenos.
- 6) **Phitos D., Kamari G. & Bareka P.**: Red Data Books as valuable tools for the conservation of plant biodiversity in Protected Areas.

Sharing the researches on the genus *Ulva* Linnaeus along the Italian coasts

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The cosmopolitan genus *Ulva* Linnaeus includes species of green macroalgae found in marine, brackish and some freshwater environments. Several species show their rapid proliferous growth and their capacity to tolerate a wide range of environmental conditions, producing in some cases “green tides”, and constituting environmental indicators. Although there is a wide literature for the determination of *Ulva* taxa, they are known for their morphological plasticity and cryptic nature that makes their morphological identification indefensible, so that many synonyms have been generated over time. At present, the knowledge of both diversity and distribution of the genus *Ulva* in the Mediterranean Sea is almost entirely based on morphological studies and there is only a few published papers dealing with molecular data. However, accurate biodiversity assessment is essential for monitoring biological introductions, and is critical for environmental management as well as for adequately evaluating temporal changes. In this context, preserved specimens of institutional herbarium are a fundamental tool for monitoring these variations.

Research conducted on the herbaria PHL (University of Messina) and ISMAR (Institute of Marine Science of Venice), as well as on new collections, allows us to progress on compiling a DNA barcode inventory of most critical taxa in the Mediterranean.

Using the plastid marker *tufA*, new molecular data have been obtained for *Ulvaceae* samples adding information to the list of *Ulva* species of the Italian coasts. In order to aid the consultation of the identified samples, digitized specimens and metadata, compiled using Dublin Core and Simple Darwin Core formats, are available on the the open access repository “Archive of Adriatic Studies” (www.archiviostudiadriatici.it) of the Institute of Marine Sciences (CNR-ISMAR) of Venice.