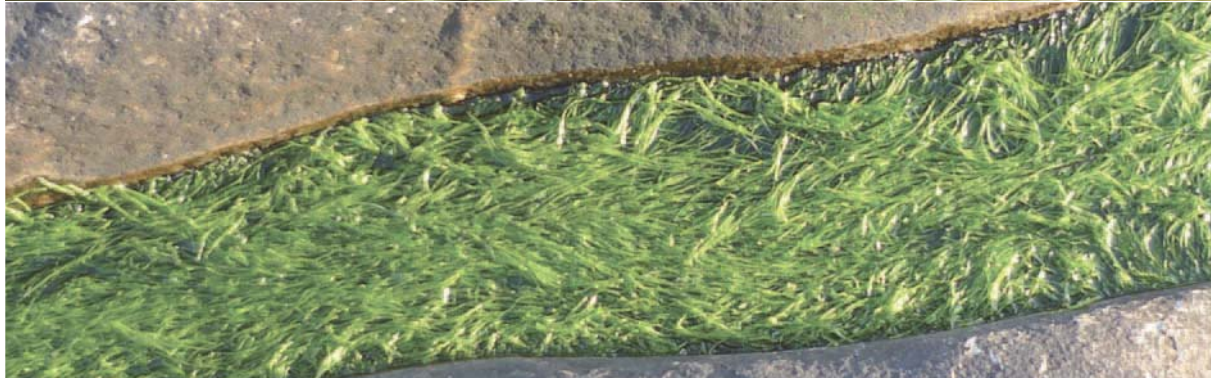




TRACTS LIVRO RESUMOS LI-  
MOS LIBRO DE RESÚMENES  
MENES BOOK OF ABSTRACTS

# XX SIMPÓSIO DE BOTÂNICA CRIPTOGÂMICA

PORTO, 22 A 25 DE JULHO DE 2015



LIVRO RESUMOS LIBRO DE RESÚMENES BO  
BRO DE RESÚMENES BOOK OF ABSTRACTS  
BOOK OF ABSTRACTS LIVRO RESUMOS LIBR

ISBN: coming soon





BOOK OF ABSTRACTS ISBN: coming soon

.....  
**ORGANIZING COMMITTEE**

Cristiana Costa Vieira - CIBIO/InBIO  
Helena Canha Pinto Hespanhol - CIBIO/InBIO  
Joana Maria Mendonça Marques - CIBIO/InBIO  
Vitor Vasconcelos - CIIMAR  
Francisco Arenas - CIIMAR

**SCIENTIFIC COMMITTEE**

Dra Isabel Sousa Pinto  
Dr Rui Pereira  
Dr Leonel Pereira

Dra Ireneia Melo  
Dra Guilhermina Marques  
Dr Paulo de Oliveira

Dra Graciela Paz- Bermúdez  
Dra Maria Eugénia Lopez de Silanes  
Dra Palmira Carvalho

Dr Javier Martínez Abaigar  
Dra Isabel Draper  
Dra Ana Séneca

Dr José Gabriel Galán  
Dr João Honrado

.....  
<http://criptogamia.up.pt/>

Symposium Venue: HF Tuela Porto, Street Arq. Marques da Silva, 200

4150-483 Porto

Tel.: (+351) 226 004 747/ Fax: (+351) 226 003 709

E-mail: [hftuelaporto@hfhotels.com](mailto:hftuelaporto@hfhotels.com)

Coordinates GPS: 41º 09' 17" N / 8º 37' 50" O

**Organization:**



**Support:**



**XX SIMPÓSIO  
DE BOTÂNICA CRIPTOGÂMICA**  
PORTO, 22 A 25 DE JULHO DE 2015



22/07/2015

Wednesday- Quarta - Miercoles

3

08h30 **Registration** | Hotel Tuela Porto, Top floor

**ROOM SUL**

09h30 Inaugural session

10h00 Plenary session | **Biodiversity and Conservation**: Anne Magurran (UStA) "*Biological diversity in a changing world*"

11h00 **Coffee-break** | **ROOM DOURADA**

11h30 Invited thematic conference | **Biodiversity and Conservation**: Sílvia Carvalho (CIBIO-InBIO) "*Incorporating evolutionary processes into systematic conservation planning*"

12h00 BC1.01 | Blowing in the wind... Phenotypic variability or speciation event in the lichen genus

12h15 BC1.02 | Bryophyte beta diversity along an elevational gradient in Terceira Island, Azores

12h30 BC1.03 | Checklist de los briófitos de la Comunidad Autónoma del País Vasco (España): actualización y bases para una lista roja

12h45 BC1.04 | El género *Prorocentrum* (Dinophyceae, Prorocentrales) en aguas neríticas y costeras de Canarias: nuevas aportaciones

13h00 BC1.05 | Aspectos bioquímicos de la tolerancia a la deshidratación en *Pleurozium schreberi* durante la época seca en el páramo de Chingaza (Colombia)

13h15 BC1.06 | Macrofungal communities of two native oak woods (*Quercus faginea* subsp. *broteroi* and *Q. rotundifolia*) in Central Portugal, with a study of sampling methods

13h30 **Lunch** | Restaurant Hotel Tuela

**ROOM SUL**

15h00 BC2.01 | Diversidad y ecología de cianobacterias bentónicas en los ríos de Castilla-La Mancha

15h15 BC2.02 | Epiphytic lichen diversity in broadleaved forests in Cadí-Moixeró Natural Park: assessing habitat status.

15h30 BC2.03 | Filling knowledge gaps on the diversity of Iberian epiphytic bryophytes

15h45 BC2.04 | Keeping up with the Bryophytes: richness, diversity and threatened taxa patterns and conservation in headwater streams

16h00 BC2.05 | LEGE Culture Collection and its cyanobacterial diversity: strains data survey analysis highlights the increasing importance of this biological resource

16h15 BC2.06 | Limitaciones al establecimiento del líquen *Pectenium plumbea* a escala de paisaje inferidas a partir de modelización del hábitat y análisis de ocupación del hábitat potencial

16h30 BC2.07 | Líquenes en los cocones del karst del Parc del Garraf (Catalunya)

16h45 BC2.08 | Los líquenes epífitos del monte verde canario y su supervivencia en plantaciones

17h00 **Coffee-break** | **ROOM DOURADA**

**ROOM DOURADA**

17h30 Communications in poster | **Biodiversity and Conservation** (Session BC)

19h30 **Porto wine tasting** | Porto Botanical Garden



23/07/2015 Thursday - Quinta -Jueves	
<b>ROOM SUL</b>	
09h00	Plenary session   <b>Technology and Heritage:</b> Patrícia Sanmartín (USC) " <i>Biology for cultural heritage preservation</i> "
10h00	Invited thematic conference   <b>Technology and heritage:</b> Rui Pereira (Alga <sup>+</sup> ) " <i>Portuguese Seaweeds - heritage and potential value</i> "
<b>ROOM SUL</b> <span style="float: right;"><b>ROOM NORTE</b></span>	
10h30	TH1.O1   SEACOLORS: Natural pigments from selected microalgae with potential application in the textile industry
10h45	TH1.O2   Lichen-induced geochemical weathering of schist surfaces in Cõa Valley Archaeological Park (NE Portugal)
11h00	BC3.O1   Diversidad y ecología de los briófitos acuáticos y semiacuáticos de los ríos de Castilla-La Mancha
11h00	BC3.O2   Meloneis (Rhaphoneidaceae, Fragilariophyceae), nuevas y raras diatomeas asociadas a praderas de Cymodocea nodosa (Ucria) Ascherson
Coffee-break   <b>ROOM DOURADA</b>	
<b>ROOM SUL</b>	
11h30	Invited thematic conference   <b>Bioindication and Environmental Management:</b> João Honrado (CIBIO-InBIO) " <i>Indicators of what, for what, and for whom? Biodiversity, ecosystems and the governance of socio-ecological systems</i> "
12h00	BEM1.O1   Airborne fungal spores in Badajoz (SW Spain) and weather influence in their seasonal distributor
12h15	BEM1.O2   Airborne fungal spores in Payerne (Switzerland)
12h30	BEM1.O3   Airborne spores of Alternaria in three cities of Extremadura (SW Spain) and different factors influence in their seasonal distribution
12h45	BEM1.O4   An ecophysiological study across the Drake Passage on the saxicole tundra forming lichens of Usnea genus
13h00	BEM1.O5   Assessing the impact of alkaline dust pollution on the genetic variation of lichen Usnea subfloridana (lichenized Ascomycota, Parmeliaceae)
13h15	BEM1.O6   Briófitos asociados a minas de cobre en la Sierra Norte de la Comunidad de Madrid
13h30	TH2.O1   Lichen biota on stone monuments in the Iberian Peninsula
13h30	TH2.O2   Evaluación de tres abonos comerciales como fuentes de nitrógeno en la acumulación de ficobiliproteína y biomasa en Arthrospira maxima (Phormidiaceae).
13h30	BC4.O1   Una oportunidad para una Lista de Algas Bentónicas Marinas de España
13h45	BC4.O2   Viabilidad de la introducción de algas caráceas para naturalizar estanques en la ciudad de Barcelona
13h00	BC4.O3   Where the wild things are: is the higher taxa approach an effective method for selecting important areas for bryophyte conservation?
Lunch   Restaurant Hotel Tuela	
<b>ROOM SUL</b> <span style="float: right;"><b>ROOM NORTE</b></span>	
15h00	BC5.O1   Modelação da influência de alterações climáticas sobre micro-habitats e padrões de atividade de molusco terrestre (Geomalacus maculosus): contributos para a conservação de micro-comunidades biológicas dominadas por criptogâmicas
15h15	BC5.O2   Notas sobre la herbivoría en esporófitos de Buxbaumia viridis en el Pirineo
15h30	BC5.O3   Nueva aproximación para la descripción de las comunidades líquénicas y el comportamiento específico
15h45	BC5.O4   Phymatolithon calcareum in maerl beds from Atlantic Europe: insights from a species-specific microsatellite study reveal considerable clonality
16h00	BC5.O5   Produção de túberas (Terfezia spp.)– Novas espécies para Portugal
16h15	BC5.O6   Project MOVECLIM: Studying bryophyte macroecological patterns along elevation transects across archipelagos
16h30	BC5.O7   Saxicolous lichen diversity in a complex landscape in NE Iberian Peninsula
16h45	BC5.O8   The new World Checklist of Hornworts and Liverworts
17h00	SEB1.O1   Estudio monográfico de las especies epífitas y hemiepífitas de Blechnum (Blechnaceae, Polypodiopsida)
17h00	SEB1.O2   Coexistence and prevalence of symbiotic microalgae in Buellia zoharyi lichen: are substrata and/or biogeographic barriers involved?
17h00	SEB1.O3   Phylogenetic analysis of symbiotic Trebouxia microalgae within the genus Parmelia reveal new monophyletic lineages.
17h00	SEB1.O4   Molecular data indicate too extensive lumping in the moss genus Amphidium (Bryophyta)
17h00	SEB1.O5   Homalothecium meridionale (M. Fleissch. & Warnst.) Hedenäs a segregated species from H. sericeum (Hedw.) Schimp. (Brachytheciaceae, Bryopsida) in the Iberian Peninsula
17h00	SEB1.O6   Potential distribution and identity of introduced Amanita muscaria worldwide
17h00	SEB1.O7   Variación de rasgos morfológicos foliares en aspleniáceas ibéricas saxícolas en función de variables climatológicas
Coffee-break   <b>ROOM DOURADA</b>	
<b>ROOM DOURADA</b>	
17h30	Communications in poster   <b>Bioindication and Environmental Management; Systematics, Evolution and Biogeography &amp; Technology and Heritage</b> (Sessions BEM, SEB & TH)
<b>ROOM GT 332 (FLOOR 3)</b>	
19h30	<b>Extraordinary session</b>   " <i>O Museu de História Natural e da Ciência da Universidade do Porto</i> "
20h30	<b>Extraordinary session</b>   Rui Figueira (IICT): " <i>Promote biodiversity data publishing and usage: the role of data papers</i> "



24/07/2015

Friday - Sexta - Viernes

5

ROOM SUL	
09h00	Plenary session   <b>Systematics, Evolution and Biogeography</b> : Christopher Ellis (RBGE) " <i>The cryptogamic epiphyte response to climate change: scaling from biogeography to habitat management</i> "
10h00	Invited thematic conference   <b>Systematics, Evolution and Biogeography</b> : Mariana Ricca (UZ) " <i>Gene expression variation in Physcomitrella patens sporophytes</i> "
	<b>ROOM SUL</b> <span style="float: right;"><b>ROOM NORTE</b></span>
10h30	SEB2.01   A preliminary evaluation of lineage differentiation in European Aneura
	BEM2.01   The herbivoral interaction between midge species, <i>Scatopsciara cunicularius</i> (Sciaridae: Diptera) and the thallose bryophyte, <i>Marchantia polymorpha</i>
10h45	SEB2.02   Advances into the evolutionary history and biogeography of Parmeliaceae (Ascomycota)
	BEM2.02   Distribución altitudinal de los líquenes terrícolas en los prados alpinos de Andorra
11h00	Coffee-break   <b>ROOM DOURADA</b>
11h30	SEB3.01   A taxonomic study on cleistocarpous species of <i>Weissia</i> (Pottiaceae, Bryophyta) in Japan
	BEM3.01   The photoreceptor of ultraviolet-B radiation (UVR8) in <i>Marchantia polymorpha</i> .
11h45	SEB3.02   An ecogeographical approach to the genetic structure of <i>Parmelina carporrhizans</i> using specific microsatellites (SSR) markers
	BEM3.02   Brioflora terrícola en olivares no labrados de la provincia de Jaén (Andalucía, España)
12h00	SEB3.03   Assessing the taxonomical significance of bistratose leaf in <i>Orthotrichum anomalum</i> -like populations from western Iberian Peninsula
	BEM3.03   Detección y control de cianobacterias en fuentes ornamentales urbanas de la ciudad de Barcelona
12h15	SEB3.04   Evaluación del crecimiento vegetativo y del éxito reproductivo en <i>Grimmia decipiens</i> en un gradiente ambiental
	BEM3.04   Efectos de las microcistinas y los extractos de cianófitos en la fotosíntesis de algas fluviales. Implicaciones ecológicas y de gestión.
12h30	SEB3.05   Dancing with the distinction of <i>Orthotrichum</i> affine and <i>O. fastigiatum</i> , a morpho-molecular approach.
	BEM3.05   How to protect bryophytes from being drowned or lost? A framework for the efficient monitoring of priority bryophyte diversity
12h45	
	BEM3.06   Long-term effects of dangerous substances on diatoms (Bacillariophyta) and their communities as measured in the Ebro River Basin (NE Spain)
13h00	SEB3.07   El nuevo orden Collemopsidiales (Dothideomyceta) alberga una gran diversidad de especies marinas del género <i>Collemopsisidium</i> .
	BEM3.07   Pulp mill industry emissions biomonitoring, and impacts on the photosynthetic performance of lichen transplants
13h15	SEB3.08   Estructura genética poblacional y flujo génico de <i>Mastodia tessellata</i> (Ascomycota, Fungi) en el eje bipolar Alaska-Antártida
	BEM3.08   Respuesta de líquenes y musgos como bioindicadores de altas concentraciones de CO2
13h30	Lunch   Restaurant Hotel Tuela
	<b>ROOM SUL</b>
15h00	<b>Extraordinary session</b>   Patrícia Tiago (Biodiversity4All): " <i>BioDiversity4All - a Portuguese citizen science project</i> "
15h30	General Assembly and Closing Ceremony
17h00	Coffee-break   <b>ROOM DOURADA</b>
	<b>ROOMS SUL &amp; NORTE</b>
17h30	<i>Meetings of Societies</i>



<b>INDEX of ABSTRACTS</b>	<b>Page</b>
<b>Plenary sessions</b>	<b>7</b>
<b>Invited thematic conferences</b>	<b>11</b>
<b>Oral Presentations</b>	
<b>Biodiversity &amp; Conservation</b>	<b>15</b>
<b>Bioindicators and Environmental Management</b>	<b>43</b>
<b>Systematics, Evolution and Biogeography</b>	<b>59</b>
<b>Technology and Heritage</b>	<b>75</b>
<b>Posters</b>	
<b>Biodiversity &amp; Conservation</b>	<b>80</b>
<b>Bioindicators and Environmental Management</b>	<b>105</b>
<b>Systematics, Evolution and Biogeography</b>	<b>112</b>
<b>Technology and Heritage</b>	<b>115</b>
<b>Extraordinary conferences</b>	<b>116</b>



# Airborne spores of *Alternaria* in three cities of Extremadura (SW Spain) and different factors influence in their seasonal distribution 45

*Maya Manzano J.M.<sup>1</sup>, Muñoz Triviño M.<sup>1</sup>, Silva Palacios I.<sup>1</sup>, Gonzalo Garijo A.<sup>2</sup>*

<sup>1</sup> University of Extremadura (Spain)

<sup>2</sup> Hospital Infanta Cristina de Badajoz (Spain)

**Introduction.** The genus *Alternaria* is recognized as important pathogen in plants, and *Alternaria* allergens are one of the most important causes of respiratory allergic disease in Europe. Extremadura is a region located in the SW of Spain; it has an extensive territory with many different landscapes. The aims of this work were to know the seasonal distribution of airborne fungal spores of *Alternaria* for three years in three cities of Extremadura, and analyze the main influencing factors, like weather and land uses.

**Material and Methods.** Sampling was taken from March 2011 to December 2013 in Don Benito, Plasencia and Zafra. A Hirst spore trap was used of a continuous way. Spores were identified and counted at x400 microscopic optical magnification with two longitudinal scans in the centre of the microscopic slide. Data were provided as daily or hourly spores' concentration per cubic meter. The main land uses some km around the cities were irrigated crops, cereal crops and grassland pastures in Don Benito, oaks forests and olive crops in Plasencia, and oak forests, grassland pastures and olive crops in Zafra. Weather data were provided by a meteorological station close to the spore traps. Non parametric correlations (Spearman test) were used to compare with weather parameters. Wind direction influence and their relationships with land uses were analyzed using a GIS program.

**Results.** *Alternaria* concentrations were higher in Don Benito (35.7 spores/m<sup>3</sup>), followed by Zafra (17.5 spores/m<sup>3</sup>) and the lowest concentrations in Plasencia (11.4 spores/m<sup>3</sup>). Concentrations decreased year to year, probably due to the increase of rain and decrease of temperature. Maximum monthly average values were recorded in September and October (Don Benito and Plasencia) or during May and June (in the case of Zafra). With respect to analysis with daily weather parameters, statistically significant correlations appeared in 51 cases out of 63. In the hourly analysis, positive significant correlations were found with temperature, and negative with relative humidity and rain. Daily spores sums were the highest in Don Benito when wind blew from west (proceeding to irrigated crops and grassland pastures), then in Plasencia that did not showed a clear pattern and finally, and the lowest in Zafra, when wind blew from west (grassland pastures).

**Conclusions.** Don Benito, where there were much irrigated crops and grassland pastures surrounded the city, showed the maximum concentrations. Airborne conidia of *Alternaria* were higher when temperature recorded were high and rainfall was low. Bimodal seasonal distributions were found. It seems that the weather parameters and land uses were important factors for explain the *Alternaria* concentrations.