

Frontiers in E3 9th cE3c Annual Meeting

# Back to the future:

bridging history into upcoming scenarios

7 - 9  
September  
2023

National Museum  
of Natural History  
and Science,  
University of Lisbon

# PROGRAMME

7  
Sep

9h00	Check-in
9h30	Opening session
10h00	Invited Keynote 
10h45	Flash Talks
11h15	Coffee-break
11h45	Short Talks
12h45	Lunch
13h45	Poster session 
14h30	Invited Keynote 
15h15	Short Talks
16h15	<i>Grab your drink and go</i> 
16h30	Roundtable
17h30	Visits to MNHNC's collections
20h00	Funtears dinner

8  
Sep

10h00	Flash Talks
10h45	Coffee-break
11h15	Short Talks
12h30	Lunch
13h30	Poster session
14h30	Short Talks
15h30	cE3c Participatory Budget
16h30	Coffee-break 
17h00	Awards
17h30	Closing session

9  
Sep

7h30	Departure from FCUL 
10h00	Lousal Mining Museum
13h00	Lunch
14h30	Departure from Lousal 
15h00	HRA, montado and chill
18h00	Return to Almada & FCUL



*you can't really know  
where you're going  
until you know  
where you have been.*

MAYA ANGELOU



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7  
Sep

All talks marked with a  are eligible for an award.  
Please vote during the last coffee-break on the 8th.

9h00

Check-in

9h30

Opening session

Marta Lourenço, Director of the National Museum  
of Natural History and Science, University of Lisbon

Cristina Máguas, Coordinator of the Centre for Ecology,  
Evolution and Environmental Changes (cE3c)

Luís Carriço / Margarida Santos-Reis, Dean / Subdirector  
of the Faculty of Sciences of the University of Lisbon

Cecília Rodrigues, Vice-rector of the University of Lisbon

10h00

Invited Keynote

*Mutualism between Earth Observation products  
and long-term ecosystem monitoring and research*

Ricardo Diaz Delgado, Doñana Biological Station & LTER Spain

Chair: Inês Rosário

10h30

Flash Talks

Chair: Rui Rebelo

 FT1

*Mapping an invasive species using UAV-acquired  
RGB data and machine learning*

Inês Domingues, Ecology of Environmental Change





FT3

*Impact of environmental factors and management in the decline of holm-oak Montados*

Leonor Sucena Paiva, Environmental Stress & Functional Ecology

FT4

*Rapid Identification of Terfezia arenaria samples using an electronic nose*

Inês Ferreira Andrade, Plant-Soil Ecology

FT5

*Biodiversity of shallow subterranean habitats in Portugal*

Rita Pereira Eusébio, Tropical and Mediterranean Biodiversity

11h00

Coffee-break

11h30

Short Talks

Chair: Alice Nunes

ST1

*Innovative reforestation - The R3forest project*

Florian Ulm, Environmental Stress & Functional Ecology

ST2

*A genomic approach of the Cork Oak and Holm Oak in the West-Mediterranean: insight on the species capacity to respond to climate change*

Mariana B. Viegas, Computational Biology and Population Genomics

ST3

*The positive effect of Nature-based Solutions for achieving the Sustainable Development Goals in Mediterranean agroecosystems: a meta-analysis*

Miguel Silva Rodrigues, Environmental Stress & Functional Ecology

ST4

*Using wildflowers seed mixes to promote plant diversity in Mediterranean road verges*

Mariana Pucarinho Fernandes, Ecology of Environmental Change

ST5

*Validating the space-for-time approach using lichens as ecological indicators for climate change impacts*

Bernardo Reis Rocha, Ecology of Environmental Change

12h30

Lunch

13h30

Poster session

14h30

Invited Keynote



*Genomic insights into species extinction risk and recovery potential using museomics*

Hernan Morales, Globe Institute, University of Copenhagen

Chair: Vitor Sousa

15h15

Short Talks

Chair: Helena Trindade

FT6

*Herbarium samples meet next generation resequencing*

Bruno Nevado, Evolutionary Genetics

ST6

*Connecting History and Prospects in the Macaronesia Region: the Poales Phylogenetic Structure*

Vanézia Rocha, Natural History and Systematics

ST7

*Comparative proteomics and phosphoproteomics reveal different molecular mechanisms in fish under scenarios of climate change*

João Miguel Moreno, Evolutionary Genetics

ST8

*Genomics of adaptation to cadmium in a spatially heterogeneous environment*

Marta Cardoso Ferreira, Evolutionary Ecology

ST9

*Automating extinction risk assessments*

Pedro Cardoso, Tropical and Mediterranean Biodiversity

16h30

Thematic rountable

at *Varições Naturais* exhibition hall

*Maintaining the past, shaping the future: the transformative role of Museum Collections in upcoming scenarios*

Moderated by Ana Daniela Soares (RTP and DN journalist)

Hernan Morales, Globe Institute, University of Copenhagen

João Paulo Constância, Director of Museu Carlos Machado and Natural History Collection Manager

Judite Alves, Deputy Director of the National Museum of Natural History and Science, University of Lisbon, and cE3c researcher

Robertor Keller, curator of the insect collection of the National Museum of Natural History and Science, University of Lisbon, and cE3c researcher

17h30

Behind the corridors: Visiting MNHNC's collections

20h00

Meeting's dinner at Pateo 51

Scan the code to open Pateo 51 location on google maps





# PROGRAMME

8  
Sep

All talks marked with a  are eligible for an award.  
Please vote during the last coffee-break on the 8th.

10h00

Flash Talks

Chair: Rosalina Gabriel

FT7

*The role of the Cuarentagri project in monitoring and issuing phytosanitary sheets concerning several key pests as part of an agricultural warning system in the Azores*

David João Horta Lopes, Island Environmental Risks & Society

FT8

*What Azorean Students' Perspectives of Bryophytes Teaches Us about Exposure and Connection to Nature*

Ana Arroz, Island Environmental Risks & Society

 FT9

*Analyzing the impact of SO2 derivatives on melanoma*

Maria Catarina Neves, Development and Evolutionary Morphogenesis

 FT10

*3D in vitro model using decellularized matrices from fetal mouse muscle to study skeletal muscle development and disease*

Pedro Santos, Development and Evolutionary Morphogenesis

FT11

*GrowLIFE: Connecting actors of the food system to promote its sustainability*

Patrícia Gomes de Almeida, Evolutionary Ecology

 FT12

*The effects of wild ungulates on smaller mammals: a systematic review and meta-analysis*

Beatriz Afonso, Conservation in Socio-Ecological Systems

FT13

*Evaluating the contribution of green roofs/walls for cities' biodiversity with the support of citizen science*

Patrícia Tiago, Conservation in Socio-Ecological System

FT14

*Wind energy in Portugal: past, present, and future*

Flávio Oliveira, Conservation in Socio-Ecological Systems

FT15

*Trait association networks of Azorean arthropods*

Gábor Pozsgai, Island Biodiversity, Biogeography & Conservation

FT16

*From research to business: sharing some deliveries of the ECO2-Tuta project*

António Onofre Soares, Island Biodiversity, Biogeography & Conservation



10h45

Coffee-break

11h15

Short Talks

Chair: Gabriela Rodrigues

ST10

*Occurrence, diversity and antifungal resistance of fungi in beach sand*

João Brandão, Centre for Environmental and Marine Studies



ST11

*Lama2-deficiency impacts myoblast differentiation in a mouse model for LAMA2-congenital muscular dystrophy*

Vanessa Ribeiro, Development and Evolutionary Morphogenesis

ST12

*A systems biology overview of congenital muscular dystrophy phenotypes*

Antonio Cordero, Development and Evolutionary Morphogenesis

ST13

*+Biodiversity@CIÊNCIAS: More than two years mobilizing CIÊNCIAS community for the improvement of the campus biodiversity and livelihood*

Sergio Chozas, Environmental Stress & Functional Ecology



ST14

*Regional temperature and soil fertility interactively affect the response of pollinators and floral resources to nutrient enrichment*

Juan Pablo Cancela, Plant-Soil Ecology

ST15

*Altitude as environmental filtering influencing phylogenetic diversity and species richness of plants in tropical mountains*

João Meira Neto, Environmental Stress & Functional Ecology

12h30

Lunch

13h30

Poster session

14h30

Short Talks

Chair: Ana Sofia Reboleira

ST16

*Arthropods traits and their vulnerability to extinction and invasiveness in Northern Macaronesian: The MACRISK Project*

Guilherme Oyarzabal, Island Biodiversity, Biogeography & Conservation

ST17

*Long-term monitoring of the Azorean native forest arthropods: The application of an Index of Biotic Integrity for future monitoring*

Paulo Borges, Island Biodiversity, Biogeography & Conservation



ST18

*Exploring the future of Terceira's native forest: predictive modeling of arthropod community composition with recurrent neural networks*

Sébastien Lhoumeau, Island Biodiversity, Biogeography & Conservation

ST19

*The Red List of invertebrates of mainland Portugal: a key tool for biodiversity conservation*

Mário Boieiro, Island Biodiversity, Biogeography & Conservation

ST20

*Conservation priorities in the endemic-rich islands of São Tomé and Príncipe*

Ricardo Faustino de Lima, Tropical and Mediterranean Biodiversity



15h30

cE3c Participatory Budget 2022

Chair: Margarida Matos

PB1

*CICAMOR: A checklist of the cicadas of the Moroccan Middle Atlas*  
Gonçalo Costa, Computational Biology and Population Genomics

PB2

*Mechanisms of coexistence between mesocarnivores in High Nature Value Farmlands: valuing their ecological role through community outreach*

Ana Luísa Barros, Conservation in Socio-Ecological Systems

PB3

*Using p53 deletion to revert LAMA2-congenital muscular dystrophy*  
Susana Martins, Development and Evolutionary Morphogenesis

cE3c Participatory Budget 2023

Chair: Margarida Matos

PB4

*Evolving & expressing: real-time transcriptome evolution during adaptation to global warming*

Marta Antunes, Evolutionary Ecology

PB5

*Genomic signatures of selection in hybridising ants: how does temperature affect viability selection during early development?*

Beatriz Portinha, Evolutionary Genetics


PB6

*The winner takes it all: when successful invasion is powered by symbiosis*

Joana Jesus, Environmental Stress & Functional Ecology

16h30

Coffee-break

All presentations marked with a  are eligible for an award. During this break, please vote on your favourite talk and poster.

17h00

Ana Neto and Meeting Awards

Chair: Manuela Sim-Sim

17h30

Closing session

Gabriela Rodrigues, on behalf of the organising committee

Judite Alves, Deputy Director of the National Museum of Natural History and Science, University of Lisbon, and cE3c researcher

Cristina Máguas, Coordinator of the Centre for Ecology, Evolution and Environmental Changes (cE3c)




# POSTERS


All posters marked with a  are eligible for an award. Please vote during the last coffee-break on the 8th.

P1 *What doesn't kill you makes you stronger": *Mus musculus domesticus* resistance to anticoagulant rodenticides in island and mainland*

Ana Carromeu-Santos, Animal Biology Department, FCUL

 P2 *Impact of changes in ECM in melanoma*

Ana Sofia L. Lopes, Development and Evolutionary Morphogenesis

 P3 *LAMA2-CMD: establishment of a new gene therapy strategy using an in vitro model*


Diogo Rodrigues Fernandes, Development and Evolutionary Morphogenesis

P4 *Transdifferentiation of plasmotocytes to crystal cells in the lymph gland of *Drosophila melanogaster**

Patrícia Rovisco e Silva Duarte, Instituto Gulbenkian de Ciência

P5 *Adjustment of wild wood mice, *Apodemus sylvaticus*, to laboratory conditions*


Maílís da Silva Carrilho, Centre for Environmental and Marine Studies

 P6 *FSC forest certification effects on biodiversity: a global review and meta-analysis*


Gonçalo Matias, Conservation in Socio-Ecological Systems

 P7 *Migration and population dynamics of *Globicephala macrorhynchus* between the Azores and the Lesser Antilles*

João B. V. Barreiros, Island Biodiversity, Biogeography & Conservation

 P8 *Occurrence of the Cookie cutter shark, *Isistius* sp., in the Azores inferred by recent bite marks in cetaceans*

João B. V. Barreiros, Island Biodiversity, Biogeography & Conservation

 P9 *The importance of vertical niche on island colonization and niche expansion – the case of Macaronesian spiders*

Ricardo Costa, Island Biodiversity, Biogeography & Conservation

 P10 *Diversity of Insects in Complex Woodland Landscapes – the case study of Cesaredas Plateau*

Tiago Carrapiço, Tropical and Mediterranean Biodiversity

 P11 *Does road proximity influence the structure and composition of ant communities?*

Tomás da Silva Pinto, Ecology of Environmental Change



- P12 *Hedychium gardnerianum* and the chemical composition of polar extract  
Ana M. L. Seca, Island Biodiversity, Biogeography & Conservation
- P13 *Different Ways to retain water: external and internal water content of 14 bryophyte species in Azorean native vegetation*  
Rosalina Gabriel, Island Biodiversity, Biogeography & Conservation
- ▶ P14 *Unveiling the potential of an invasive plant: the antioxidant and antidiabetic properties of Gunnera tinctoria (Molina) Mirbel*  
Wilson Rodrigues Tavares, Island Environmental Risks & Society
- P15 *The historical lichen collections of the Herbarium of the Porto University (PO): an unnoticed treasure*  
Silvana Munzi, Plant-Soil Ecology
- P16 *Foraging distribution of West African Crested Tern (Thalasseus albididorsalis) breeding in Guinea-Bissau*  
Edna Correia, Centre for Environmental and Marine Studies
- P17 *Can passive acoustic methods efficiently monitor bird communities during winter?*  
Ana Isabel Leal, Tropical and Mediterranean Biodiversity
- ▶ P18 *Patterns and predictors of bat activity around isolated trees in rice fields of Guinea-Bissau (West Africa)*  
Gonçalo Afonso Fernandes, Tropical and Mediterranean Biodiversity
- ▶ P19 *Influence of insectivorous birds and bats on rice production in West Africa: insights from a field experiment in Guinea-Bissau*  
Madalena Sottomayor, Tropical and Mediterranean Biodiversity
- ▶ P20 *Ecology and conservation of subterranean biodiversity of the Estremenho Karst Massif (Portugal)*  
Tomás Alves, Tropical and Mediterranean Biodiversity
- P21 *How does water-table depth influence the physiological status of a tropical dune forest?*  
Cristina Antunes, Environmental Stress & Functional Ecology
- ▶ P22 *Native and invasive coexisting Fabaceae: is there a clear distinction in seed endophytes*  
Joana Jesus, Environmental Stress & Functional Ecology
- ▶ P23 *Cistus Ladanifer as an indicator species to measure the success of natural regeneration and reforestation after wildfires*  
Madeleine Tosioul Laurent, Environmental Stress & Functional Ecology
- P24 *Diversity and functional roles of floral glands in Malpighiaceae: insights in Lophopterys floribunda W.R. Anderson & C. Davis*  
Renata Meira, Environmental Stress & Functional Ecology
- P25 *Monitoring, restoring and adapting Portuguese agroforestry systems to enhance resilience to climate change*  
Bruna Reis, Ecology of Environmental Change
- ▶ P26 *Genotyping by Sequencing brings new insights into the population structure and local adaptation of Holm Oak*  
Davide Galhofa, Computational Biology and Population Genomics



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**P27** *The interplay between different types of negative interactions may generate priority effects between spider mite species*  
 Miguel Cruz, Evolutionary Ecology
- 
**P28** *A sex-specific trade-off between pesticide resistance and thermal tolerance in *Tetranychus urticae**  
 Sofia G. Costa, Evolutionary Ecology
- 
**P29** *Signatures of adaptation at the mitochondrial level in endemic freshwater fish species from contrasting environments*  
 Catarina Bernardo, Evolutionary Genetics
- P30** *Mechanisms of maintenance and evolution of blood cell proportions in *Drosophila melanogaster**  
 Diogo Roque, Instituto Gulbenkian de Ciência
- P31** *Fight or Flight: How does the stability of predator-prey dynamics affect evolution?*  
 Jessica King, Evolutionary Ecology
- 
**P32** *Constitution and enrichment of the phycological collection of the João de Carvalho e Vasconcellos Herbarium (LISI), Instituto Superior de Agronomia*  
 João Santos, Ecology of Environmental Change
- P33** *Bridging the gap: enhancing climate scenario communication and policy relevance for effective mitigation strategies*  
 Jiesper Tristan Pedersen, Environmental Stress & Functional Ecology
- 
**P34** *Innovation ecosystems to smart farming uptake: some critical aspects*  
 Ana Ventura, Plant-Soil Ecology
- 
**P35** *A review of climate change higher education programmes available in Europe*  
 Carolina Vieira, Ecology of Environmental Change
- 
**P36** *Supporting adaptation decision-making under overshoot scenarios in the Lisbon Metropolitan Area*  
 Carolina Vieira, Ecology of Environmental Change
- P37** *Integrated Assessment Model to assess socioeconomic pathways in the transition to a climate-resilient society*  
 Tomás Calheiros e Menezes, Ecology of Environmental Change
- P38** *ECHO - Engaging Citizens in soil science: the road to Healthier Soils*  
 Silvana Munzi, Plant-Soil Ecology