TiBE2011

Abstracts

5-6th
December 2011

ORGANISATION

CIBIO (Research Centre in Biodiversity and Genetic Resources, University of Porto, Portugal) and **InBio** Associate Laboratory

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TiBE's Permanent Organizing Committee

Population Genetics, hybridisation and speciation group (PopGen)

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ABOUT

TiBE 2011: New Challenges in Conservation Genetics

TiBE, Trends in Biodiversity and Evolution, is an annual meeting organised by CIBIO, Research Centre in Biodiversity and Genetic Resources/InBio, Associate laboratory. These meetings aim to bring together senior researchers, post-graduate and graduate students in Biological Sciences, and promote a relaxing but insightful discussion about cutting edge topics on Biodiversity and Evolution. Each year a specific subject will be chosen, and recognised senior scientists will be invited to report their views, opinions and novel results. Young researchers and post-graduate students will also be invited to participate and present their recent and innovative work.

TiBE 2011 is devoted to "New Challenges in Conservation Genetics", a discipline which has received considerable attention in recent years by evolutionary biologists, and has voraciously incorporated many technologies to speed up and increase the accuracy of conservation decision-making. It takes place at December 5 - 6th in Campus Agrário de Vairão, University of Porto, and is hosted by *ConGen-Conservation Genetics and Wildlife Management research group*, at CIBIO.

The scientific program includes four invited plenary lectures from prominent researchers, 16 oral communications (to be selected from participants) and two poster sessions covering the most up-to-date findings in this field of evolutionary biology.

We hope that the University Porto-Campus of Vairão, located in a beautiful rural area in Vila do Conde (20 km north of Porto), will provide an excellent atmosphere for such scientific forum in one of the most interesting and stimulating areas of Biology.

E-mail : tibe2011@mail.icav.up.pt
Web page: http://www.cibio-tibe.org

SCIENTIFIC PROGRAMME

5th DECEMBER

8.00 - 9.00	Bus transfer passing from Estalagem Brasão, Villa C Hotel and metro station to Campus Agrário de Vairão
9.00	Registration
9.30	Opening session
	SESSION 1. Population Genetics and Conservation
9.40	Plenary lecture - "Spatially explicit Approximate Bayesian Computation: lessons from owls and humans" **Jérôme Goudet** (Department of Ecology and Evolution, Faculté de Biologie et de Médecine, Université de Lausanne, Switzerland)
10.30	Coffee break
11.00	T1.1 Species delimitation based on population genetic parameters **Catarina Pinho**
11.20	T1.2 Application of the unified species concept reveals distinct lineages for disjunct endemics threatened with extinction in the Brassica repanda (Brassicaceae) complex **Margherita Lega**
11.40	T1.3 Cryptic speciation in the field vole: a multilocus approach confirms highly divergent lineages in Europe **Joana Paupério**
12.00	T1.4 The curious case of Bradypus variegatus (common sloth) microsatellites **Sofia Silva**
12.20	Lunch
14.30	Plenary lecture - "Very spatial indeed: some consequences of space (and time) on population genetics inference" **Lounès Chikhi** (CNRS, UMR 5174, Evolution et Diversité Biologique, Université Paul Sabatier, Toulouse, France & Instituto Gulbenkian de Ciência, Oeiras, Portugal)
15.20	T1.5 The role of central and marginal populations in genetic connectivity of Iberian pines **Iva Kovačić**

15.40	T1.6 Evolutionary conservation biology of the Mediterranean red coral **Jean-Baptiste Ledoux**
16.00	Coffee break
16.30	T1.7 Environmentally-driven population structure of the bluefin tuna in the Mediterranean Sea **Giulia Riccioni**
16.50	T1.8 Estimating the historical divergence of Iberian wolf populations **Pedro Silva**
17.10	T1.9 Spatial and temporal patterns of population structure of humpback whales in west coast of Africa **Inês Carvalho**
17.30	Poster session 1
18.30	Free buffet
21.00 - 21.30	Bus transfer from Campus Agrário de Vairão to metro station, Estalagem Brasão, and Villa C Hotel

6th DECEMBER

8.30 - 9.30	Bus transfer passing from Estalagem Brasão, Villa C Hotel and metro station to Campus Agrário de Vairão
9.40	Plenary lecture - "The interaction between genetic, environmental and epigenetic variation: effects of inbreeding" **Philippine Vergeer** (Radboud University Nijmegen, The Netherlands)
10.20	T1.10 Signature of a pre-human population collapse in the critically endangered Reunion Island endemic forest bird Coracina newtoni **Jordi Salmona**
11.00	Coffee break
11.20	T1.11 Phylogeography and conservation of a long-range disperser: the example of Necora puber **Joana do Nascimento**
11.40	T1.12 Tracking invasion histories in the sea using multilocus data and ABC methods **Marta Pascual**

12.00	T1.13 The impact of the social structure on patterns of genetic diversity: a simulation approach **Bárbara Parreira**
12.20	Lunch
	SESSION 2. From Conservation Genetics to Conservation Genomics
14.30	Plenary lecture - "Targeted population genomics in non-model species" **Jeffrey M. Good** (Department of Biological Sciences, University of Montana, USA)
15.20	T2.1 Towards "on-the-spot" analysis: Population proteomics of European hake **Elena G. González**
15.40	T2.2 Population structure as revealed by SNPs in the Iberian honey bee (Apis mellifera iberiensis) **Julio César Chávez-Galarza**
16.00	Coffee break
16.30	T2.3 Conservation genetics on Islands, a case study of the Canarian Egyptian vulture **Rosa Agudo**
16.50	T2.4 The genetic basis of Drosophila lifespan differences **Jorge Vieira**
17.10	T2.5 Conservation genetics of the Eurasian shads **Stephen Sabatino**
17.30	Poster session 2
18.30	Closing session
19.00 - 19.30	Bus transfer from Campus Agrário de Vairão to metro station, Estalagem Brasão, and Villa C Hotel

T2.2 Population structure as revealed by SNPs in the Iberian honey bee (*Apis mellifera iberiensis*)

Julio César Chávez-Galarza[1], J. Spencer Johnston[2], João Carlos Azevedo[1], Irene Muñoz[3], María del Pilar de la Rúa[3], John Clifton Patton[4], Filipe José Costa[5], Alice Pinto[1]

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The Honey bee, *Apis mellifera* L., occurs naturally in Africa, Middle East and Europe. The adaptation to a diversity of ecological conditions has led to evolution of over 24 subspecies. The honey bee subspecies that occurs in the Iberian Peninsula is *Apis mellifera iberiensis*, which is originated by natural hybridization between lineage A (African) and lineage M (western European). The objective of this study was to unravel the population structure of *A. m. iberiensis* by carrying out a genome wide analysis using SNPs. Over 711 individuals sampled across three transects (one along the Atlantic Coast, one along the Mediterranean coast, and one central) in the Iberian peninsula were genotyped for 1536 SNPs using the golden gate assay of Illumina. The genetic structure was analyzed by a Bayesian clustering method. It was observed a north – south cline in the three transects and the largest difference was exhibited between the Atlantic populations and the other two transects.

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