

4TH INTERNATIONAL CONGRESS ON BIODIVERSITY

“Man, Natural Habitats and Euro-Mediterranean Biodiversity”



November 17th-19th, 2017

Hosted by the Entomological Society of Malta



MINISTRY OF FINANCE



Dipartimento di Scienze Biologiche, Geologiche e Ambientali



L-Università ta' Malta



MINISTRY FOR SUSTAINABLE DEVELOPMENT, THE ENVIRONMENT AND CLIMATE CHANGE



4th International Congress on Biodiversity

*“Man, Natural Habitats and
Euro-Mediterranean Biodiversity”*

Malta, 17-19th November 2017

Venues:

Friday, 17th November 2017
Sala Antoine de Paule, San Anton Palace,
Attard - Malta

Saturday, 18th & Sunday, 19th November 2017
Paradise Bay Hotel, Ċirkewwa - Malta

Friday, 17th November 2017

12:00 – 13:30 Registration

13:30 Welcome address

PROF DAVID MIFSUD - *President of the Entomological Society of Malta*

PROF JOSEPH CACCIOTTOLO - *Pro-Rector, University of Malta*

PROF CARMELO MONACO – *Director, University of Catania*

13:45 Opening address

Her Excellency The President of Malta,

MARIE-LOUISE COLEIRO PRECA

14:00 Introductory speech

Hon. Minister for the Environment, Sustainable Development and Climate Change

DR JOSÉ HERRERA

Plenary Lectures

14:15 Bridging the Gap: regulating Climate Change and its impacts on Ocean Life

Prof Simone BORG, *University of Malta, Msida, Malta*

14:45 A diversity of phenotypes, beyond species and genes

Prof Alessandro MINELLI, *University of Padova, Italy*

15:15 Assessing biodiversity: a glorious past, an uncertain future

Dr Ivan LÖBL, *Museum of Natural History, Geneva, Switzerland*

15:45 – 16:15 Coffee break

16:30 Global seafood markets: challenges and solutions for consumers

Prof Venera FERRITO, *University of Catania, Italy*

17:00 Gaia's revenge and the hope of decreasing Mediterranean utopia

Prof Serge LATOUCHE, *Emeritus of Economics, University of Orsay, France*

17:30 Geological hazard in Central Mediterranean area

Prof Carmelo MONACO, *University of Catania, Italy*

18:00 Biodiversity Conservation and Management and the role of Natura 2000 in Malta

Mr Darrin STEVENS, *Environmental and Resources Authority*

18:30 General remarks

Dr Corrado BIANCA, *Ente Fauna Siciliana* & Dr Ignazio SPARACIO, *Biodiversity Journal*

19:00 Conference Dinner (Melita Gardens, Attard)

22:00 Bus (Melita Gardens to Paradise Bay Hotel in Ċirkewwa)

Saturday, 18th November, 2017 [09:00 – 13:00]

ALIEN INVASIVE SPECIES

(Parallel session with Environmental Safety & Microbiology)

Chairpersons: **Dr Stefano Reale** - Istituto Zooprofilattico Sperimentale della Sicilia, Palermo, Italy
Dr Santo Caracappa - Istituto Zooprofilattico Sperimentale della Sicilia, Palermo, Italy
Prof Venera Ferrito - Department of Biological Sciences, Geology and Environment, University of Catania, Italy

- 09:00** **The threats to Malta from invasive species**
Alfred E. BALDACCHINO
- 09:15** **Effects of *Caulerpa cylindracea* on marine biodiversity**
Anna Maria MANNINO & Paolo BALISTRERI
- 09:30** **Invasive mealybugs (Hemiptera: Pseudococcidae) and the threats they present to Mediterranean countries**
Gillian W. WATSON & David MIFSUD
- 09:45** **On the alien invasive species *Popillia japonica* (Coleoptera: Scarabaeidae)**
Sergei A. KURBATOV
- 10:00** **Risk of introduction and establishment of exotic plant pathogens and insects harmful to Mediterranean plant biodiversity**
Matilde TESSITORI & Vera D'URSO
- 10:15** **Managing biotic interactions for plant protection: the case of the invasive *Tuta absoluta* on tomato crop**
Mario V. BALZAN
- 10:30** Coffee break

MARINE BIOLOGY AND MALACOLOGY

(Parallel session with Environmental Safety & Microbiology)

Chairpersons: **Prof Joseph Borg** - Department of Biology, University of Malta, Msida, Malta
Dr Danilo Scuderi - Biodiversital Journal, Palermo, Italy
Dr Ignazio Sparacio - Biodiversital Journal, Palermo, Italy

11:00 **New data on the genus *Albinaria* Vest, 1867 (Pulmonata, Clausiliidae) from the island of Astypalea and neighboring islets (Dodecanese Archipelago, Greece)**
Fabio LIBERTO, Mauro GRANO, Cristina CATTANEO, Maria Stella COLOMBA & Ignazio SPARACIO

11:15 **Molecular barcoding applied to the Mediterranean turtles biological matrices**
Viviana GIANGRECO, Stefano REALE, Maria Flaminia PERSICHETTI, Antonio GENTILE, Tiziana LUPO, Maria PIAZZA & Santo CARACAPPA

11:30 **On some interesting species of the malacological Monterosato collection housed in the “Museo di Scienze della Terra” of Catania**
Agatino REITANO, Fabio LIBERTO, Maria Stella COLOMBA & Ignazio SPARACIO

11:45 **A massive record of the rare “mole crab” *Albunea carabus* (Linne’, 1758) (Decapoda, Anomura, Hippoidea) along the sandy coasts of Catania**
Danilo SCUDERI, Alberto VILLARI & Massimiliano ANGELICO

12:00 **Molecular studies on the genus *Muticaria* Lindholm, 1925 (Pulmonata, Clausiliidae) from the Maltese Islands**
Maria Stella COLOMBA, Armando GREGORINI, David CILIA, Fabio LIBERTO, Agatino REITANO & Ignazio SPARACIO

12:15 **Are the salwater oysters *Pinctada radiata* (Leach, 1814) and *Pinctada fucata* (Gould, 1850) synonyms or different species? The case of some Mediterranean populations**
Danilo SCUDERI, Paolo BALISTRERI & Alfio GERMANÀ

12:30 **New taxonomical and biological observations on *Jujubinus sequenzae* Ghisotti & Melone, 1975 (Gastropoda: Vetigastropoda: Trochidae)**
Danilo SCUDERI, Alberto VILLARI & Alfio VIOLA

13:00 Lunch

Saturday, 18th November, 2017 [09:00 – 13:00]

ENVIRONMENTAL SAFETY AND MICROBIOLOGY

(Parallel session with Alien Invasive Species and Marine Biology & Malacology)

Chairpersons: **Prof Salvatore Seminara** - Istituto Zooprofilattico Sperimentale della Sicilia, Palermo, Italy
Dr Vasilis Valdramidis - Department of Food Studies and Environmental Health, University of Malta, Msida, Malta
Drs. Francesca Gaggia - Department of Agricultural Sciences, University of Bologna, Italy

- 09:00** **Honey bee (*Apis mellifera*) gut microbiota shaping post medicaments oral administration**
Daniele ALBERONI, Francesca GAGGÌA, Loredana BAFFONI, Catherine STANTON, Paul ROSS & Diana DI GIOIA
- 09:15** **Investigation on the Maltese honeybee (*Apis mellifera ruttneri*) gut microbiota**
Daniele ALBERONI, Francesca GAGGÌA, Loredana BAFFONI, David MIFSUD & Diana DI GIOIA
- 09:30** **Detection of human enteric viruses in water and shellfish samples collected in Sicily**
Giuseppa PURPARI, Santina DI BELLA, Francesca GUCCIARDI, Francesco MIRA, Santino BARRECA, Laura DI PAOLA, Giusi MACALUSO, Patrizia DI MARCO & Annalisa GUERCIO
- 09:45** **The Biobank of the “Istituto Zooprofilattico Sperimentale” of Sicily: an important resource in medical research for safe and quality storage of biological specimens**
Annalisa GUERCIO, Santina DI BELLA, Giusi MACALUSO, Patrizia DI MARCO, Maria PIAZZA, Laura RUSSOTTO, Stefano VULLO, Francesco MIRA & Giuseppa PURPARI
- 10:00** **Microbial diversity of traditional Sicilian cheeses**
Raimondo GAGLIO, Isabella MANCUSO, Giusi MACALUSO, Marisa PALMERI, Massimo TODARO, Luca SETTANNI, Stefano REALE, Cinzia CARAMONE & Maria Luisa SCATASSA
- 10:15** **Metagenomic approach to identify the complex microbiota in Sicilian cheeses**
Floriana BONANNO, Stefano REALE, Maria Luisa SCATASSA, Isabella MANCUSO, Rosario PITTI & Fabrizio VITALE
- 10:30** **Phlebovirus detection in phlebotominae vectors captured in endemic areas**
Stefano REALE, Davide ANZA, Serena GUTTADAURIA, Federica BRUNO, Germano CASTELLI & Fabrizio VITALE
- 10:45** Coffee break
- 11:15** **Creation of a pollen database for Mediterranean flowering plants**
Eugenia OLIVERI, Davide VANCHIERI, Alessia GALANTE, Pierluigi FERINA, Mariella Piazza & Stefano REALE
- 11:30** **The long-term effects of probiotics in medical therapy: a clinical study of ulcerative colitis**
Marcello ROMEO

- 11:45** **Deep sequencing targeted to Tripanosomatidae strain identification**
Stefano REALE, Ignazio SAMMARCO, Floriana BONANNO, Federica BRUNO, Germano CASTELLI,
Antonella MIGLIAZZO & Fabrizio VITALE
- 12:00** **Viral Encephalopathy and Retinopathy (VER) in Mediterranean wild
and farmed fish species: the experience of the 'Istituto Zooprofilattico
Sperimentale' of Sicily**
Giuseppa PURPARI, Giusi MACALUSO, Santina DI BELLA, Francesco MIRA, Vincenza CANNELLA,
Francesca GUCCIARDI, Alessandra CASTIGLIA, Patrizia DI MARCO & Annalisa GUERCIO
- 12:15** **Analysis of anhydrosugars, carbon fraction and soluble inorganic ions on
particulate emission from Solid Biomass Heating Systems: preliminary
study**
Milena STRACQUADANIO, Ettore PETRALIA, Massimo BERICO, Teresa M. G. LA TORRETTA,
Antonella MALAGUTI, Giuseppe CREMONA & Maurizio GUALTIERI
- 12:30** **Ticks from migratory birds as possible route to spread Crimean-Congo
Hemorrhagic fever virus: preliminary data about species composition from
three Italian Islands**
Luciano TOMA, Silvio D'ALESSIO, Elisa MANCUSO, Gian Mario COSSEDDU, Marco DI LUCA,
Giuseppe MANCUSO, Giuseppe MANCINI, Federica MONACO & Maria GOFFREDO
- 12:45** **Fungal contraminants of *Pirus communis* var. *bambinella*: macroscopic and
molecular characterization**
Arianne MUSCAT, Davide SARDELLA, Stephen DECELIS, Maria GOUGOULI,
Konstantinos P. KOUTSOUMANIS, Sonia MARÍN & Vasilis VALDRAMIDIS
- 13:00** Lunch

Saturday, 18th November, 2017 [14:00 – 19:30]

ENTOMOLOGY

Chairpersons: **Dr Ivan Löbl** - Muséum d'Histoire Naturelle, Genève, Switzerland
Prof David Mifsud - Institute of Earth Systems, University of Malta, Msida, Malta
Prof Giorgio Sabella - Department of Biological Sciences, Geology and Environment, University of Catania, Italy

- 14:00** **Insect life in the Maltese Islands – Quo Vadis?**
Guido BONETT
- 14:15** **Preliminary investigations on the thrips (Insecta: Thysanoptera) fauna of the Maltese Islands**
Godwin DEGABRIELE, Adriano CAVALLERI & David MIFSUD
- 14:30** **Saproxylic invertebrate fauna of the urban green areas of the city of Palermo (Italy)**
Michele BELLAVISTA & Ignazio SPARACIO
- 14:45** **Distribution and current status of Hermit Beetle populations in Natura 2000 Protected areas in Bulgaria**
Rostislav BEKCHIEV & Romyana KOSTOVA
- 15:00** **Plant galls induced by insects in the Maltese Islands**
David MIFSUD
- 15:15** **New records of Auchenorrhyncha (Hemiptera) from the Maltese Islands**
Vera D'URSO, David MIFSUD, Giorgio SABELLA & Oscar LISI
- 15:30** Coffee break
- 16:00** **Preliminary data on leafhoppers (Hemiptera: Fulgomorpha and Cicadomorpha) found in coastal sand dunes and salt marshes in the Black Sea along the Bulgarian coast**
Ilija Gjonov
- 16:15** **Towards a checklist of the terrestrial and freshwater Arthropoda of the Maltese Islands**
David DANDRIA & David MIFSUD
- 16:30** **Unexpected Coleoptera and Lepidoptera (Insecta) biodiversity in the surroundings of a copper mine in Sredna Gora Mountains (Bulgaria)**
Romyana KOSTOVA, Rostislav BEKCHIEV & Stoyan BESHKOV
- 16:45** **Endemic Curculionoidea to the islands within the Strait of Sicily**
Enzo COLONNELLI & David MIFSUD
- 17:00** **Neuroptera of Pantelleria, the Pelagic Islands and the Maltese archipelago: an annotated checklist with new records**
Roberto A. PANTALEONI, Laura LORU & David MIFSUD
- 17:30 – 19:30** **Poster session**
- 20:00** Conference dinner

Saturday, 18th November, 2017 [17:30 – 19:30]

POSTER SESSION

***Aedes albopictus* (Skuse, 1894) (Diptera; Culicidae) occurs on several islands in the Mediterranean Sea; the importance of monitoring and surveillance activities**

Luciano TOMA, Maria GOFFREDO, Guglielmo PAMPIGLIONE, Francesco SEVERINI & Marco DI LUCA

Invasive alien beetles (Coleoptera) associated with wood in the Maltese Islands

David MIFSUD & Simone CUTAJAR

Contribution to the alien flora of the Maltese Islands: New records, observations on invasive species and taxonomic updates

Stephen MIFSUD

Monitoring of *Caretta caretta* in the sandy beaches of the Vendicari Natural Reserve (Sicily, Italy)

Corrado BIANCA, Alfredo PETRALIA, Fabio AMENTA, Paolino UCCELLO, Marco MASTRIANI, Filadelfo BROGNA & Giorgio SABELLA

Species biodiversity of Sabratha National Park

Tarek B. JDEIDI & Suzan Taher ABDUSSAME

The Black Stork, *Ciconia nigra* Linnaeus, 1758 (Aves: Ciconiidae) in central-eastern Calabria (Italy)

Caterina DIMA & Francesco LAMANNA

***Bruchidius raddianae* (Coleoptera: Bruchidae) on Lampedusa; first record in Italy but what about the other European Countries?**

Luciano TOMA, Rafael Yus RAMOS, Francesco SEVERINI, Marco DI LUCA, Maurizio MEI & Marcello Franco ZAMPETTI

Unearthing marine biodiversity through citizen science - the Spot the Jellyfish and the Spot the Alien Fish campaign case studies from the Maltese Islands (Central Mediterranean)

Alan DEIDUN & Arnold SCIBERRAS

Preliminary studies on the tick fauna of the Maltese Islands

Enya Maria HABER, Simone CUTAJAR, Jolyon MEDLOCK, Kayleigh HANSFORD, Alexander VAUX & David MIFSUD

Random sampling overestimates species richness of shrubland vegetation

Lara GALEA & Sandro LANFRANCO

The lichens of the Maltese Islands: An ongoing project

Jennifer FIORENTINO

Tenebrionidae (Coleoptera) from the Tunisian island group La Galite with comments on the zoogeography of the archipelago

Martin LILLIG

Parasitoids of butterflies and moths of the Maltese Islands

Lucia FARRUGIA & David MIFSUD

Eriophyid mites as biological control agents of two invasive alien plants in Europe: *Ailanthus altissima* and *Ambrosia artemisiifolia*

Francesca MARINI, Biljana VIDOVIC, Radmila PETANOVIC, Peter TOTH, Matthew AUGÉ, Domenico VALENZANO, Enrico de LILLO & Massimo CRISTOFARO

Additions for the Dikarya and Myxogastria of the Maltese Islands

Stephen MIFSUD

Odonata of Sicilian southeastern swamp lakes “Pantano Cuba” and “Pantano Longarini”

Paolo GALASSO, Alessandro MARLETTA & Andrea CORSO

Proposal for a “sanctuary area” dedicated to the protection of *Brachytrupes megacephalus* (Orthoptera, Grillidae) in the Natural Reserve of Vendicari (Sicily, Italy)

Alfredo PETRALIA, Fabio AMENTA, Corrado BIANCA, Filadelfo BROGNA, Ettore PETRALIA, Giorgio SABELLA & Fabio VIGLIANISI

A collaborative monitoring system to survey Maltese orchids

Simone CUTAJAR, Thomas SEBRECHTS, Oliver BURDEKIN, Stephen MIFSUD, Charles BENNETT & Merlijn JOCQUE

Influence of *Thymbra capitata* on species diversity in shrublands

Lara GALEA, Sandro LANFRANCO & Sylvana SCERRI

Wild carnivores of Misallatah Natural Reserve and National Park

Ibrahim E. ELKAHWAGE & Tarek B. JDEIDI

Regulation of the access to genetic resources of natural and historical value and sharing the benefits of their utilisation to favour conservation efforts

Louis FRESTA

An evaluation of the prevalence of *Mycobacterium marinum* in aquaria and its impact on man

Juanita Ann SPITERI, Paul CUSCHIERI & Julia HAIDER

The importance of salt marshes for the protection of rare species of macro Lepidoptera in the Mediterranean basin

Salvatore BELLA

Ant-associated fungi in Bulgaria

Albena LAPEVA-GJONOVA

Sunday, 19th November, 2017 [09:00 – 12:00]

BIODIVERSITY AND CONSERVATION

- Chairpersons:** Prof Alfredo Petralia - Ente Fauna Siciliana Onlus Association, Noto, Italy
Dr Sandro Lanfranco - Department of Biology, University of Malta, Msida, Malta
- 09:00** Preliminary studies on *Allium* section *Allium* subsection *Scordoprasum* in the Maltese Islands
Stephen MIFSUD & Owen MIFSUD
- 09:15** Balancing conflicting needs - A case study in the Conservation of the Endemic honeybee, *Apis mellifera ruttneri*
Marion ZAMMIT-MANGION, Simone CUTAJAR, Thomas GALEA, Alexander UZUNOV, Marina MEIXNER & David MIFSUD
- 09:30** Involvement of institutions and local communities in turtles and cetacean monitoring and conservation in Maltese waters through networking
Carmen MIFSUD, Nikolas CASSAR, James GRIXTI, Darrin STEVENS, Mark TABONE & Benjamin METZGER
- 09:45** Benefits in avifaunistic monitoring through the use of an unmanned aerial vehicle (UAV) in the natural reserve of Saline di Priolo (Sicily, Italy)
Giorgio SABELLA, Fabio Massimo VIGLIANISI, Sergio ROTONDI & Fabio CILEA
- 10:00** Genetic database development for the characterisation of Sicilian sheep population
Viviana GIANGRECO, Maurizio BIVONA, Tiziana LUPO, Daniele MACRÌ, Pierluigi FERINA, Floriana BONANNO, Francesco Paolo CHIFARI & Stefano REALE
- 10:15** Analysis and comparison of three Coleoptera families in organic and conventional orchards within the “Etna Regional Park” (Catania, Sicily)
Giorgio SABELLA & Francesca MESSINA
- 10:30** Coffee break
- 11:00** The islets of the Ionian coast of Sicily: flora and vegetation records provide insight to changes of human land use for the past 100 years
Saverio SCIANDRELLO & Pietro MINISSALE
- 11:15** First report of limno-terrestrial tardigrades from the Maltese archipelago
Oscar LISI
- 11:30** Evaluating risks from sea-level rise on metapopulations of *Brachytrupes megacephalus* (Lefèbvre, 1827) on the island of Malta
Louis F. CASSAR, Charles GALDIES & Nicholai XUEREB
- 11:45** Terrestrial mammals of the satellite islands of Sardinia (Italy)
Marco Masseti
- 12:00** General conclusion (Closure of Congress)



Entomological Society of Malta