

Maria Litto

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Education

- 2011–2013 **MSc in Biological Sciences**, *University of Naples Federico II*, Naples, *110/110 with honours*.
Curriculum "Biodiversity, conservation and environmental quality"
- 2004–2011 **BS in Biological Sciences**, *University of Naples Federico II*, Naples, *103/110*
Curriculum "Bioecological"
- 1998–2002 **Linguistic Lycaenum Diploma**, *Lycaenum "B.G. Bertoni"*, Battipaglia(SA), *84/100*

Publications

Journal articles

- S. Cozzolino, S. Fineschi, **M. Litto**, G. Scopece, J. Trunschke, F. P. Schiestl **Herbivory increases fruit set in *Silene latifolia*: a consequence of induced pollinator-attracting floral volatiles?** *Journal of Chemical Ecology*, 41: 622-630, **DOI:** 10.1007/s10886-015-0597-3
- **M. Litto**, G. Scopece, S. Fineschi, F. P. Schiestl, S. Cozzolino **Herbivory affects male and female reproductive success differently in dioecious *Silene latifolia* (Caryophyllaceae)**, *Entomologia Experimentalis et Applicata*, 157: 60-67, **DOI:** 10.1111/eea.12337

Conference posters

- **M. Litto**, G. Scopece, S. Fineschi, F. Schiestl, S. Cozzolino **Effects of herbivory on pollen flow, reproductive success and trophic interactions in *Brassica rapa*** 110° Congresso Società Botanica Italiana (SBI) Onlus, 14-18 September 2015, Pavia, Italy
- **M. Litto**, G. Scopece, F. Schiestl, S. Cozzolino, S. Fineschi **Invasive herbivore-induced floral volatiles increase fruit set in *Silene latifolia***, Gordon Research Conference, 29 June – 4 July 2014, Girona, Spain
- G. Scopece, C. Arena, **M. Litto**, F. Schiestl, S. Cozzolino, S. Fineschi **Effect of novel herbivore on floral signalling in *Silene latifolia*: the interplay between reproduction and defence**, Plant Biology Europe FESPB/EPSO Congress, 22-26 June 2014, Dublin, Ireland
- G. Scopece, **M. Litto**, S. Fineschi, F. Schiestl, S. Cozzolino, **Pollinators and herbivores: do they interact? A case study with *Silene latifolia* and *Spodoptera littoralis***, 108° Congresso Società Botanica Italiana (SBI) Onlus, 18-20 settembre 2013, Baselga di Piné, Trento, Italy

Master thesis

- Title **The effect of the invasive herbivore *Spodoptera littoralis* on the reproductive fitness of *Silene latifolia*.**
- Supervisor Prof. Salvatore Cozzolino
- Description Comprehension of the effects of herbivore *S. littoralis* attacks on pollination dynamics and on plant fitness of *Silene latifolia*. Plants respond to the herbivory with the emission of Herbivore-Induced Plant Volatile (HIPVs) which causes a variation in the constitutive mixture of Biogenic Volatile Organic Compounds (BVOCs) and interfere with biotic interactions like the plant attractiveness to pollinators, with growth mechanisms and with the physiological regulation of the plant itself

Bachelor thesis

- Title **External Transcribed Spacers (ETSs) as an investigation tool in the molecular phylogeny of *Cirsium* sect. *Eriolepis*.**
- Supervisor Prof. Paolo Caputo
- Description Reconstruction of phylogenetic relationships between components of the genus *Cirsium* sect. *Eriolepis* through the use of ETS marker, using both maximum parsimony and UPGMA

Work Experience

- 13 Sept – 13 Oct 2013 **Field Assistantship, Prof. Peter Anderson – Swedish University of Agricultural Sciences**
- Sampling and rearing of *Spodoptera littoralis*
- 17 Mar 2014 – 14 July 2015 **Research Assistantship, Prof. Salvatore Cozzolino – University of Naples Federico II**
- *Silene latifolia* and *Brassica rapa* reproductive fitness
 - Multi-trophic interaction between plants and insects
- 2 Apr – 30 June 2015 **Collaboration for Scientific Research Activity, Prof. Ted Turlings – University of Neuchâtel, Switzerland**
- Effects of exotic and native herbivores on the foraging behavior of parasitoid *Cotesia glomerata* (InvaVol Project)
- 20 Apr – 20 July 2015 **Department of Biology Research Grant, Prof. Sergio Esposito – University of Naples Federico II**
- Effects of grazing and dispersion of pollen on the Mediterranean maquis, part of the project SIBAFEQ, prot. n. 4888 4/10/2013
- 2 Apr – 27 Aug 2015 **Field Assistantship, Prof. Peter Anderson – Swedish University of Agricultural Sciences**
- Sampling and rearing of *Spodoptera littoralis*
- 1 Sept 2015 – 31 May 2016 **Research Assistantship, Prof. Peter Anderson – Swedish University of Agricultural Sciences**
- Comparison of several populations of *Spodoptera littoralis*, with respect to different kinds of phenotypic plasticity or condition dependent expression

Fieldwork Experience

- Aug 2010 Sampling of *Cirsium vallis demonii*, Pollino National Park, Southern Italy.
Sept 2013 Sampling of *Spodoptera littoralis*, Battipaglia, Italy.
Mar 2014 Sampling of *Dactylorhiza romana*, Teano (CE), Italy.
May 2014 Sampling of *Dactylorhiza sambucina*, Roccamonfina (CE), Italy.
Aug 2015 Sampling of *Spodoptera littoralis*, Battipaglia, Italy.

Participation in Workshops and Camps

- 2011 **Campus “Biodiversity and Sustainable Tourism”, 16 - 23 July** CEA “La Primula” - Pisciotta (SA)
 - Dune vegetation monitoring; drafting paper summarizing the status of the coast; awareness raising and outreach
- 2011 **Campus “Sustainable management with natural engineering interventions for archaeological and naturalistic restoration and environmental regeneration”, 19 - 23 Sept** AIPIN – Sez. Campania
 - Techniques of naturalistic engineering
- 2013 **Workshop “Plant Volatiles: from Ecology to Exploitation”, 3 – 5 Apr** European Science Foundation - Progetto EuroVOL – Firenze
 - Role of Biogenic Volatile Organic Compounds (BVOCs) in the food web and in the interaction of plants with the environment

Participation in Conferences

- 2014 **Conference “Biogenic Hydrocarbons & the Atmosphere”, 29 June – 04 July** – Gordon Research Conference - Melia Golf Vichy Catalan Business and Convention Center
 - Cutting-edge research of the emission and fate of hydrocarbons released by vegetation
- 2014 **Conference “SIP 15, 15th International Symposium on Insect-Plant Relationships” 17 – 22 July** – University of Neuchâtel, Switzerland
 - The latest developments in research on the relationships between plants and insects, from physiological mechanisms to ecological processes
- 2016 **Conference “IC-E3 Final Symposium” 23 – 27 May** – Swedish University of Agricultural Science (SLU), Alnarp, Sweden
 - Focused on the modulation of olfactory signals and signal processing over different time scales in insect chemical communication

Skills

Research skills

- Molecular biology **DNA extraction, PCR, Cloning and Sequencing;**
- Chemical ecology **Dynamic Headspace Analysis, GS-MS, Spectrophotometry;**
- Plant biology **Multi-trophic interactions, Plant identification and taxonomy, Seed germination, Phenology, Fitness, Planning and management of experiments with plants in greenhouse and in the field, Hand-pollination and crossing of different plant species (Orchids, *Silene*, *Brassica*), Nectar extraction**
- Entomology **Sampling and rearing moths and butterflies (Lepidoptera), Behavioral experiments (choice/no choice experiments, feeding experiments, wind tunnel assays, four-arm/Y-tube olfactometer assays), Immunity assays**
- Phylogeny **Multiple sequence alignment, Maximum parsimony, UPGMA**

Computer skills

Phylogenetics	Winclada, NONA, ClustalW, Bioedit
Spectrometer	AvaSoft 8
Statistics	IBM SPSS Statistics 21, R Statistical Package
Bioinformatics	EMBL, GenBank, InterPRO, GENEs, HGDM, ExPASy, NCBI, ConCavity
OS	Windows, Mac OS, Linux
Office Suite	Excel, PowerPoint, Publisher, Word
Graphics	Adobe Photoshop CS5, Image J

Other skills

Teaching	Supervising undergraduate students
Driving licence	B

Language

Italian	Native
English	Upper intermediate – IELTS helds on 30 April 2016 - Overall band: 6.5 (Listening: 6.5; Reading: 7.5; Writing: 6.5; Speaking: 6.0)
French	Elementary

Scientific Societies affiliation

2013 – 2015 **Botanical Society of America**, section: Ecological

References

Prof. Peter Anderson, Professor in Chemical Ecology, Dept. Of Plant Protection Biology, Swedish University of Agricultural Sciences, Box 102, SE-230 53 Alnarp, Sweden, e-mail: peter.anderson@slu.se , Phone: +46 40 41 52 99, Fax: +46 40 46 19 91

Prof. Salvatore Cozzolino, Full Professor in Plant Biology, Dept. of Biology, University of Naples Federico II, Complesso Universitario di Monte S. Angelo, Via Cinthia, 80126, Napoli, Italy, Building 7, room 0D-27, e-mail: salvatore.cozzolino@unina.it , Phone: +39 081679186 (room), +39 081679185 (lab), Fax: +39 081679233

Dr. Kristina Karlsson Green, Post Doc in Chemical Ecology, Dept. Of Plant Protection Biology, Swedish University of Agricultural Sciences, Box 102, SE-230 53 Alnarp, Sweden, e-mail: kristina.karlsson.green@slu.se , Phone: +46 737 850238