

113° Congresso della Società Botanica Italiana

V INTERNATIONAL PLANT SCIENCE CONFERENCE (IPSC)

Fisciano (SA), 12 - 15 September 2018



ABSTRACTS

KEYNOTE LECTURES, COMMUNICATIONS, POSTERS

ISBN 978-88-85915-22-0



UNIVERSITÀ DEGLI STUDI DI SALERNO

Scientific Committee

Consolata Siniscalco (Torino) (President)
Maria Maddalena Altamura (Roma)
Stefania Biondi (Bologna)
Alessandro Chiarucci (Bologna)
Salvatore Cozzolino (Napoli)
Lorenzo Peruzzi (Pisa)
Ferruccio Poli (Bologna)

Local Committee

Stefano Castiglione (Salerno)
Angela Cicatelli (Salerno)
Francesco Guarino (Salerno)
Rosangela Adesso (Salerno)
Vincenzo De Feo (Salerno)
Sonia Piacente (Salerno)
Nunziatina De Tommasi (Salerno)
Laura De Martino (Salerno)
Milena Masullo (Salerno)
Teresa Mencherini (Salerno)
Paola Montoro (Salerno)
Massimiliano D'Ambola (Salerno)
Antonietta Cerulli (Salerno)
Daniela Baldantoni (Salerno)
Giovanni Vigliotta (Salerno)

Sponsor



Influence of die-back syndrome on reproductive strategies within *Phragmites australis* populations

Martina Cerri¹, Francesco Ferranti¹, Andrea Coppi², Bruno Foggi², Daniela Gigante³, Lorenzo Lastrucci², Andrea Onofri¹, Roberto Venanzoni³, Daniele Viciani², and Lara Reale¹

¹Department of Agricultural, Food and Environmental Sciences, University of Perugia, Italy; ²Department of Chemistry, Biology and Biotechnology, University of Perugia, Italy; ³Department of Biology, University of Florence, Italy. cerri.martina@gmail.com

Sexual plant reproduction is a strategy that allows plant populations to increase genetic variability, and consequently to be more efficient in adapting to new environments and to overcome stress conditions. Here, we focus on the reproductive mode of *Phragmites australis*, an important sub-cosmopolite species that can spread both by clonal propagation and sexual reproduction. In Europe, *P. australis* is affected by severe decline (known as Reed Die-Back Syndrome or RDBS); this study aims to understand if in RDBS condition the reproductive strategy of *P. australis* was altered, based on the hypothesis that if stress occurs, plants are likely to use their energy to increase genetic variability to overcome the stress.

Inflorescences in five Italian wetlands were sampled from healthy and RDBS-affected stands of *P. australis*. Seed production, seed viability and seed germination were evaluated, with germination monitored under two different water conditions: moist and submerged.

Stress induced by RDBS appears to influence the reproductive strategy of *P. australis*. In RDBS-affected stands, seed production was significantly higher than healthy stands for four of five sites. Seed viability and germination were also higher in RDBS-affected stands, but these differences were lower and site dependent.