



Conferenza per giovani botanici 6-7 febbraio 2020 Rivolto a dottorandi e post-doc che abbiano finito il dottorato da massimo 3 anni.
partecipazione aperta anche a studenti magistrali e borsisti post-laurea.

Sessione 1 - Sistematica e conservazione

Discovery and Characterization of *Pycnoporellus fulgens* from an unmanaged forest in the Biogenetic Nature Reserve of Vallombrosa within the LIFE MycoRestore Project

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Environmental mycology

Biocontrol

Pycnoporellus fulgens

LIFE MycoRestore

Unfavorable growth environments generated by climate change alter the equilibrium between a pathogen's virulence, and the number of trees which are able to complete their life cycle without any serious interference from the pathogen. In this context, the LIFE MycoRestore (LIFE18/CCA/ES/001110) project combines forestry practices and mycological resources, and aims at increasing the resilience of Mediterranean forests in selected areas of Italy, Spain and Portugal by a) identifying mycorrhizal/non-mycorrhizal fungi that characterize healthier environments, and which are known biocontrol agents and b) introducing or boosting up them in the environments which are mostly affected by biotic and abiotic stress. In Italy, the forest of the Biogenetic Nature Reserve of Vallombrosa (Tuscan Apennines, Florence province) has been chosen as one of the demonstrative site for this project. Here, wilting and death of whole chestnut (*Castanea sativa*) and silver fir (*Abies alba*) trees is often observed as a consequence of ink disease (*Phytophthora cambivora* and *P. cinnamomi*) and root rot (*Heterobasidion abietinum* and *Armillaria ostoyae*), respectively. A preliminary, morphology-based screening of sporocarp-producing fungi in soil around healthy and symptomatic trees suggested a reduction in species richness in the latter condition. Further assessments in this direction will be made through metagenomics in soil, wood and leaf samples coming from healthy and diseased plants. A first indication of this hidden fungal diversity comes from the sampling, from an unmanaged sub-area characterized by tree falls, of *Pycnoporellus fulgens*, a rare polypore. A phylogenetic analysis will clarify whether this isolate relates with samples from other environments.