Anna Hopkins

Biography

Dr Anna Hopkins is a lecturer in conservation biology and microbial ecology at Edith Cowan University. Her research interests include the impact of disturbance on microbial communities, invasive fungal plant pathogens and the complex interactions between fungi, plants and animals.

EcoTAS abstract

The implications of a drying climate have been investigated for aboveground vegetation, yet below-ground processes and organisms have received considerably less attention despite their central contributions to ecosystem resilience and stability. Here, we present results from two studies of the rhizosphere fungi in soils of contrasting Mediterranean Type Ecosystems. Both studies examined how projected future climate conditions may impact rhizosphere fungal

SYMPOSIUM: Microscopic interactions with macroscopic effects - the role of micro-organisms in maintaining and monitoring the health of macro-communities and organisms (Part 2)

Tuesday, November 28, 2017

4:00 PM - 6:00 PM

Brokenback Room

Oral presentation

composition, richness and function. In the first study, we experimentally reduced rainfall over four years in a Mediterranean shrubland ecosystem. Soil samples were collected from plant-free interspaces and the rhizospheres of two common and widespread Myrtaceous subshrubs in both drought and control plots. In the second study, soil was collected from the rhizosphere of the dominant Myrtaceous tree species at two sites (and corresponding controls) in a forest ecosystem that has experienced a natural and severe drought and heatwave event 4 years previously. In both experiments, the DNA of rhizosphere fungal communities was extracted, amplified and subjected to high throughput sequencing. We found a significant effect of drought treatment on rhizosphere fungal dynamics. Fungal richness was significantly higher in drought plots in both the shrubland and forest ecosystems when compared with controls. Drought treatments also resulted in altered fungal community composition and changes in the abundance of key functional groups. Both studies demonstrate that projected future drier conditions will have an effect on the rhizosphere fungal communities. Disruptions to fungal communities have serious implications for ecosystem resilience and stability.

Hopkins A [1,3] , Birnbaum C [2,3] , Fontaine J [3] , Enright N [3] , Hardy G [3] , Ruthrof K [3,4]

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Drought alters the rhizosphere fungi in two contrasting Mediterranean Type Ecosystems

EcoTAS 2017

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Kiri (Reihana) Spraggs

EcoTAS abstract

The widespread degradation of water quality and quantity and its state of mauri, is a significant issue for Māori. This issue is represented by widespread degradation of

Open session (1)

Monday, November 27, 2017

3:45 PM - 5:45 PM

Sugarloaf Room

Oral presentation