

To
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Confirmation

This is to confirm that Mr Dr Mohammad Jankju from Ferdowsi University of Mashhad Range and Watershed Management, Iran, took part in the 12th European Dry Grassland Meeting (http://www.edgg.org/edgg_meeting_2015.html) in Mainz (Germany), Green School in the Botanic Garden of the University of Mainz, from 22 – 25 May 2015.

In addition we confirm the participation

- in post conference trip at 26th May to Rhine Hesse
- in post conference trip at 27th May to Middle Rhine Valley

Yours sincerely,

Ute Becker (University of Mainz)

Thomas Becker (University of Trier)

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Mainz 22.05.2015



12th European Dry Grassland Meeting
From Population Biology to Community Ecology
22-27 May 2015, Mainz, Germany

Book of Abstracts

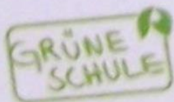
www.edgg.org/edgg_meeting_2015.html



Pulsatilla vulgaris at the Martinsberg site in Rhine Hesse. Photo: Th. Becker



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Effects of wildfire burning on seed bank diversity, and mycorrhiza symbiosis of perennials grasses in a dry grassland

Mohammad Jankju, Vajihe Khaksarzadeh, Zakieh Ghasemi Mayvan

Wildfire burning is a common problem, in many dry grasslands worldwide. Its effects on the aboveground vegetation characteristics (e.g. biomass, diversity, richness) have frequently been studied. However, little information is available on the effects of wildfire burning on soil seed bank and on plant-mycorrhiza symbiosis. Dash-Arasi dry grassland in Quchan, NE Iran, had been under wildfire burning in summer 2012. We established 10 line-transects, in the burnt or control sites during subsequent growing season (spring-summer 2013). Soil samples (40 replicates) were taken from 5-10 cm soil depth, for studying seedbank diversity and composition. Furthermore, root and soil samples were taken from the root media of dominant plants species. Seedbank species diversity, richness and evenness were higher in the burnt than the control site. However, the higher diversity indices were due to increase of ephemeral (annual grasses and forbs plus geophytes), in the cost of reducing perennials (grasses, forbs and shrubs) in the soil seed bank. Wildfire burning reduced mycorrhizal colonization with the dominant perennial grass *Festuca ovina*, but it increased colonization rate and spore number for the invasive ephemeral grass *Poa bulbosa*. At the time of wildfire burning (July), ephemeral species had finished their phenology whereas perennial species were still in the flowering or vegetative stages. Therefore, a summer time burning should be avoided in the dry grasslands, as it will favor invasive species and harm perennial species, via affecting their seed bank diversity and mycorrhiza symbiosis.

Keywords: seedbank, dry grasslands, soil ecology, fire, richness, Iran