# XIV MEDECOS
# &
# XIII AEET meeting

Human driven scenarios for evolutionary and ecological changes

Abstract book

31st January - 4th February 2017
Seville, Spain

XIV MEDECOS & XIII AEET meeting

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**S.08-11-Oral**

**Fragmentation effects and extinction debt in South African fynbos**

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South African fynbos is threatened by fragmentation through land use and anthropogenic changes to fire regimes. We investigated the consequences of these processes for plants and birds. Our natural experiment design allowed us to look for signs of extinction debt (i.e. delayed extinctions). Vegetation and bird composition and trait data were collected in three South Outeniqua Sandstone Fynbos habitat configurations: fragmented patches (associated with anthropogenically driven habitat loss

**S.08-12-Poster**

**Do landscape properties affect the process of post-fire vegetation recovery? A case study from the Taygetos Mountain, Greece**

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Fires of 2007 have consumed large areas of Black pine and endemic fir forests in Greece. The current research aims at examining the role of geomorphology and lithology that govern the soil properties upon the post-fire vegetation recovery at the landscape level. A case study from Taygetos Mt, a large part of which was burned in 2007, is presented. Based on the interpretation of a high spatial and spectral resolution satellite image (WorldView-3, 4/2015), GIS thematic layers have been created showing unburned and regenerated patches over various lithological types. A network of sites was selected for field sampling representing various combinations of the above. Data on recovery of the main tree species as well as on total vegetation cover were collected. Results prove the relationship between regeneration ability and plant species traits as well as the existence of unburned patches near the burned ones. Black pine had regenerated from seeds dispersed from cones that have remained intact on unburned or scorched trees, close enough to the burned patches, while Greek fir presented remarkably low regeneration, lacking of any response mechanism. Plant species recovery seems to be controlled by the geology as it was found weaker in plots overlying carbonate, permeable, not easily erodible formations as compared to that observed over clastic, impermeable, erodible formations of schists, even for the same species. In conclusion, post-fire vegetation recovery at the landscape level seems to be a complex process controlled not only from species biology but also from the landscape features.