



XIII Congresso de ECOLOGIA

III International Symposium of Ecology and Evolution

Múltiplas ecologias: evolução e diversidade

08 a 12 de outubro de 2017 • UFV - VIÇOSA | MG

FIRE PROMOTED OPPORTUNITY FOR NATIVE GRASSES IN A GRASSLAND INVADDED BY *MELINIS MINUTIFLORA* P. BEAUV. (POACEAE)

Carolline Zatta Fieker^{1*}, Cassiano Aimberê Dorneles Welker², Matheus Gonçalves dos Reis¹,
Leonardo dos Santos Ambrosino¹, Sávio Freire Bruno³

1. Universidade Federal de São Carlos, São Carlos-SP, 13565-905, Brazil. 2. Universidade Federal de Uberlândia, Uberlândia-MG, 38400-902, Brazil. 3. Universidade Federal Fluminense/Faculdade de Veterinária, Santa Rosa, Niterói-RJ - 24230340, Brazil. *Correspondence to carolfieker@gmail.com

Tema/Meio de apresentação: Pôster

Alien grasses are a relevant threat to the Cerrado biodiversity, particularly because they exert a strong competitive pressure on the native flora. The African grass *Melinis minutiflora* is a very aggressive intruder and became a conservation problem in many protected areas of Brazil. To determine whether fire may affect the establishment of native and invasive species, we compared the flowering species of Poaceae family after a burning occurred in the grasslands of Serra da Canastra National Park (SCNP), MG. We distributed 22 plots of 1 m² along two 50m transects in a burned area and repeated this procedure in an adjacent unburned area (control), which covered 0.5 ha. Both areas were strongly invaded and dominated by *M. minutiflora*. The field surveys were carried out in 4 post-fire periods: 2nd (T.01), 6th (T.02), 10th (T.03), and 14th (T.04) month after the burning occurred in June/2015. The collected material was deposited in the following herbaria: SPSC-UFSCar/SP, HUFU-UFU/MG and ICN-UFRGS/RS. We recorded a total of 14 native grass species and 1 dominant alien species flowering in the study area. In T.01 post-fire period, there were no statistical differences in Shannon diversity index H' (t:-2,12; df:8,92; p=0,06) nor in Simpson's dominance D (t:1,14; df:5,01; p=0,3) between burned and unburned areas. However, in T.02 the differences became evident with significantly higher diversity in burned area (t:2,89; df:28,75; p=0,007) and higher dominance in unburned area (t:-2,25; df:18,19; p=0,03). The following periods showed no evidence of differences in all tests (p>0,05). *Elionurus muticus*, *Eriochrysis holcoides*, *Paspalum erianthum* and *Steinchisma decipiens* were recorded only in burned area during T.1 and/or T.2 when *M. minutiflora* cover area was low. Differently, *Echinolaena inflexa* and *Loudetiopsis chrysothrix* flowered in areas totally covered by *M. minutiflora*. The fire promoted an opportunity for native grasses to complete their lifecycle and produce seeds, despite the alien grass dominated the burned area again.

The authors thank SISBIO/ICMBio for project approval. CZF and MGR hold CAPES and CNPq Doctorate scholarships, respectively.