



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

TEA TIME 4 SCIENCE PROJECT: CONTRIBUTIONS FROM THE MOUNTAIN RANGE MESOREGION OF SANTA CATARINA, BRAZIL

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Tema/Meio de apresentação: Ecologia de Ecossistemas/Pôster

Plant litter decomposition is a key-drive in soil ecosystem, being influenced by climate changes. *Tea time 4 Science* is a crowdsourcing citizen science project with the aim of monitoring effects of climate change on decomposition using tea bags worldwide. A simplified litter bag experiment was carried out with commercially tetrahedron-shaped synthetic tea bags from Lypton®, with sides of 5 cm, containing 2 g of green tea (89%) or rooibos tea (93%). A standardized lot of tea bags was sent from the Swedish base of the project. Green and rooibos tea bags were weighted and buried pairwise at a depth of 8 cm in three different ecosystems: *Pinus taeda* L. plantation, *Mimosa scabrella* Benth system (bracatingal), and mixed ombrophilous forest. The experiment was conducted in the area belonging to the Federal University of Santa Catarina (UFSC), Campus Curitibanos, at the mountain mesoregion of Santa Catarina State, Brazil. The climate according to Köppen is Cfb: temperate with warm summer precipitation and precipitation equally distributed along the year (1.100 to 1.200 mm). Bags were exposed in April 2017. After 60 days, the bags were retrieved, dried at 60°C and reweighted. The Tea Bag Index was calculated based on decomposition rate (k) and stabilization factor of rooibos tea (more recalcitrant) and green tea (more labile), according to Keuskamp et al. 2013. The k values were similar among the sites (0.0271 ± 0.0052), being in general higher than values obtained in temperate regions. The mean rate of mass loss was $66.8 \pm 5.1\%$ for the green tea and $35.0 \pm 2.4\%$ for the rooibos tea. This method can provide comparisons among different biomes and ecosystems, and can lead to insights over time in climate change effects on decomposition.