



# MEDECOSXIII

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**SHORT COMMUNICATION****Assessing the presence of exotic eucalypt wildlings in Portuguese landscapes****Catry Filipe X.<sup>1</sup>, Moreira Francisco<sup>1</sup>, Deus Ernesto<sup>2</sup> & Silva Joaquim S.<sup>1</sup>**

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**Abstract**

*Eucalyptus globulus* (Tasmanian blue gum) is one of the most important pulpwood plantation species in the world, and nowadays it is present in most continents. *E. globulus* has great economic importance in the western Mediterranean Basin, and in Portugal it has recently become the most widespread tree species. The natural establishment (wildling establishment) of this fast-growing exotic species may have undesirable consequences, but little is known about where and how often it occurs, or which are the factors influencing its occurrence. In order to investigate these issues, we selected several sampling areas (roadside transects) distributed throughout the Portuguese mainland. Routes for transect location were previously defined using GIS, by overlaying road maps with a map of the distribution of forest stands where *E. globulus* is the dominant species. Transects were proportionally distributed through all 12 Portuguese ecological regions according to the area of eucalypt stands in each region. Each transect had at most 100 m long and 10 m wide, and was traveled by car. The driver provided constant speed (30-40 km/h) along the road, while the observer counted and registered the number of eucalypt wildlings in the roadside. The sampled roadside consisted of a strip of land with no private management, between the asphalt road and the eucalypt stand. In total we assessed nearly 3000 transects. Eucalypt wildlings were found in all ecological regions and in about half of the sampled transects. We fitted regression models to assess the potential influence of environmental variables on wildling establishment from plantations. The presence of wildlings was found to be affected by precipitation (both annual precipitation and/or number of days with precipitation), relative humidity, number of frost days, and solar radiation. In general, eucalypt wildlings were more common in wetter areas, with lower number of frost days and with lower solar radiation.

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