

Forest Landscapes and Global Change

New Frontiers
in Management,
Conservation
and Restoration

Abstracts

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Poster Session **Biodiversity conservation and planning PB 16**

CONTRIBUTION TO THE CHARACTERIZATION OF *Gentiana pneumonanthe* L. AND *Maculinea alcon* L. DISTRIBUTION IN THE ALVÃO NATURAL PARK

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The aim of this research was to study the distribution of *Gentiana pneumonanthe* in the geographic area of Alvão Natural Park, in order to determine the area of *Maculinea alcon* expansion as well as the region's potential for development and conservation of this butterfly species. Due to the ecology needs of *Maculinea alcon* L (simultaneous presence of *G. pneumonanthe*, the host plant, and *Myrmica* sp., ants that adopt *M. alcon* on its larvae stadium), we made a survey of plants, butterflies and ants' nests, using a DGPS. Data collected during the field work was then used to create a GIS, in order to analyse the relationship between plants, ants and butterflies. The results show that the land with less soil human disturbance was the most favourable habitat to the plants development as well as to the ants and, therefore, to the presence of butterflies.

Poster Session **Urban Forestry PU 5**

NITROGEN-USE EFFICIENCY AND ECONOMIC EFFICIENCY OF SLOW-RELEASE N FERTILISERS APPLIED TO AN IRRIGATED TURF IN NE PORTUGAL

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Urban forestry and urban greening are at the top of the political agenda, since they beautify the landscape and improve the health and well-being of urban dwellers. They also bring several ecological benefits such as air cleansing, carbon sequestration and storm water retention. However, their social and ecological benefits can be reduced by an inappropriate management. An unbalanced N fertilization program, for instance, may lead to water and atmospheric pollution due to nitrate leaching and greenhouse gas emissions. In this work, the effect of three slow-release fertilisers was compared with a conventional fertiliser in a turf of the Instituto Politécnico de Bragança, Portugal. The fertilisers used were: Floranid 16-7-15 (slow-release fertiliser, IBDU/Isodur); Basacote 9M 16-8-12 (controlled-release fertiliser, copolymer ethylene acrylic); Nitroteck 20-8-10 (stabilized fertiliser, dicyandiamide + coating with polyterpene); and Nitrolusal (ammonium nitrate, 20.5% N) split into two fractions. Based on DM yield, N concentration in dry material and fertilisation costs, indices of N-use efficiency and economic efficiency were estimated. The results showed that Basacote released less N than that required for an adequate plant growth in early spring. Moreover, the release period seemed to be negatively longer than that specified by the manufacturer. Nitroteck, Floranid and Nitrolusal showed similar N-use efficiency. The indices of economic efficiency ordered the slow-release fertilisers as Nitroteck > Floranid > Basacote.