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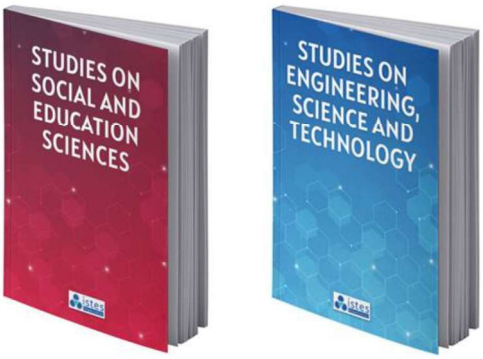

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ECOLOGICAL FACTORS AFFECTING PLANT COMMUNITIES' DISTRIBUTION ON INTERNATIONAL TAGUS RIVER NATURAL PARK

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Straddling the frontiers of two neighbouring countries around the Tagus River, Portugal and Spain, the International Tagus River Natural Park (ITRNP) extends over an area of 26,484 hectares in the district of Castelo Branco, Portugal. The vegetation of the Park is mainly typical of Mediterranean ecosystems, such as cork oak and holm oak, Mediterranean evergreen scrubland with strawberry tree, kerms oak, terebinth, mock privet, and mastic; thermophilic formations of rockrose, lavender and broom; bush formations, more or less open with olive and wild olive trees; and riparian vegetation, emphasizing the bushweed formations and the galleries of willow trees. In this territory, 726 taxa distributed by 98 botanical families have been identified to date, emphasizing the 51 endemic species detected. In terms of protected Flora the ITRNP the Portuguese endemisms Festuca duriotagana and Linaria amethystea subsp. multipunctata. There are also 41 Iberian endemisms. A study was conducted in the ITRNP to provide insight into the main factors affecting the different plant communities' distribution in the region, and to provide recommendations for the selection of indigenous species in order to monitor the succession process of vegetation in areas affected by wildfires. The study was conducted in sites evenly distributed in the area of ITRNP representing homogeneous vegetation types, the floristic composition and cover of the species were determined in 188 floristic inventories. During the study period, a total of 249 species were recorded. Cluster analysis identified 12 main vegetation communities. The sites were ecologically characterized, at a local scale, using environmental data as bioclimatology, lithology, topography, soil type and its physical and chemical composition. The role of those environmental factors in the explanation of vegetation variation was assessed using canonical correspondence analysis (CCA). Geostatistics tools were also used to interpolate the species distribution and the community diversity index.

Keywords: plant conservation, natural park, environmental factors, plant communities

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