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Biodiversity in Chestnut Woodlots: Management Regimen vs Woodlot Size

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ABSTRACT

This paper analyzes the effect of woodlot size and land-use intensity on the species richness of vascular plants, birds, beetles, and ants in *Castanea sativa* (chestnut) woodlots of the northwestern Iberian Peninsula included in the category " 9260 *Castanea sativa* woodland" , " Annex I, DC 92/43/European Community" . The results show that the surface area of the woodlot did not affect the richness of vascular plants and ants but did affect birds and beetles. The level of abandonment of the woodlot affected only the richness of vascular plants, while the use level had no significant impact on species richness of any of the groups. The degree of maturity of the woodlot, estimated by the tree-trunk circumference, determined only the richness of plants but not that of different groups of animals. In conclusion: 1) Plants and animals responded differently to woodlot size, abandonment, and the degree of maturity of the woodlots; 2) Traditional agricultural practices do not negatively affect the biodiversity of the chestnut woodlots of the northwestern Iberian Peninsula or favor plant diversity; and 3) A traditional use of these woodlots may continue to play an important role in maintaining the diversity of plant species in the area.

KEYWORDS

Vascular Plants; Birds; Beetles; Ants; Species Richness; *Castanea* Woodlands

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