

## THE EFFECT OF LIVESTOCK, ALTITUDE AND SLOPE ON A RED-LEGGED PARTRIDGE POPULATION IN ALENTEJO, PORTUGAL

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Red-legged partridge (*Alectoris rufa*) is a non-migratory bird found mainly in the Iberian Peninsula whose conservation status is Least Concern. However, in the last decades there has been a growing concern for the loss of habitat quality due to the results of either land abandonment or farming intensification.

This study was conducted in an agrosilvopastoral land use system called montado. The density of pairs in the spring and the covey size in late summer were estimated during three years (2007–2009) and related to water abundance, dirty tracks density, altitude, slope, and stocking rates of beef cattle, sheep, goat and horse. Linear foot transects (6 transects were walked 4 times, 112 km in total) were used to locate red-legged partridge and their abundance was estimated using the Distance® version 6.0 software. Habitat selectivity was analyzed, both in spring and late summer, using Bailey's confidence intervals. The average population size was lower in late summer (0.28 birds/ha) than in spring (average 0.3), suggesting a very low reproductive success and/or a high post-breeding dispersal rate. Pairs in spring showed selective neutrality, whereas the coveys in late summer avoided areas grazed by goat and selected areas with a developed shrub layer.

The larger coveys selected relatively high altitudes, relatively steep hills and relatively low stocking rate areas. Apparently, due to intensive grazing there is a lack of cover to provide protection against severe weather and escape from predators. Therefore, reducing stocking rates seems an appropriate measure in order to improve cover quality and thus to enhance the carrying capacity of montado for the red-legged partridge.