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Abstract

The seasonal and interannual trends of the Great Bustard *Otis tarda* population at Villafáfila Reserve between 1987 and 1995 were analyzed, based on 42 censuses and radiotracking results. The numbers of birds changed between a minimum of 1000-1300 during summer (May-September) and a maximum of 1700-2000 birds during winter (October-April), with an absolute maximum of 2013 birds in January 1995. These numbers show that the Reserve holds the world's densest population of the species. Peak numbers of males occur in March, when they gather at display sites, after which over half of them abandon the Reserve before summer. About 20-30% of males return to it in autumn, while the remaining will only come back next spring to try mating again. The number of females breeding in the Reserve is 600-700, increasing during October-April to 1000-1100 birds. In contrast to the main mating target of males arriving in spring, all females arrive in autumn, being probably more attracted by food abundance, and their winter distribution may in part determine the lek distribution. Given these seasonal movements of up to 25 linear km, any conservation effort within the Reserve may be fruitless if areas surrounding it are not adequately managed. The population has remained stable throughout the eight years covered by our study, with a slight but not significant trend to increase.