Grey partridge *Perdix perdix* population status in central northern France: spatial variability in density and 1994-2004 trend

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The grey partridge *Perdix perdix* is an important management concern in the European farmland. Pair numbers severely declined during the 20th century. As a result, the species has been listed in SPEC category 3, i.e. 'Unfavourable' conservation status in Europe. The largest population of western Europe occurs in France. Its status there is, therefore, decisive for the European conservation status of the species as well as for the future of the species. Populations of partridges in central northern France have been routinely surveyed since the 1980s for hunting management purposes. In this paper, we use this long-term and wide-scale survey to portray the demographic status of partridge populations. We emphasise the amplitude of spatio-temporal variations in breeding densities. In the 2000s, a number of areas where agriculture is intensive and where the species is hunted still sustain > 50 pairs/km², whereas densities are < 5 pairs/km² in other areas. These low densities are, however, higher than those commonly reported from other parts of Europe. Density levels exhibit large differences at a small spatial scale and show large year-to-year fluctuations which make trend assessment difficult. The 1994-2004 and 1999-2004 trends displayed different patterns; densities increased, decreased or were stable depending upon agricultural region.

**Key words:** breeding density, France, grey partridge, *Perdix perdix*, spatial variability, temporal fluctuations, trend

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