



[About this journals](#)
[Abstracting & Indexing](#)
[Article Requests](#)
[Reprints](#)

The Urban Decline of the House Sparrow (*Passer domesticus*): A Possible Link with Electromagnetic Radiation

Authors: Alfonso Balmori ^a; Örjan Hallberg ^b

Affiliations: ^a Direccion General del Medio Natural, Consejería de Medio Ambiente. Valladolid. Spain

^b Hallberg Independent Research. Trångsund. Sweden

DOI: 10.1080/15368370701410558

Publication Frequency: 4 issues per year

Published in: [Electromagnetic Biology and Medicine](#), Volume [26](#), Issue [2](#)
April 2007 , pages 141 - 151

Subjects: [Cell Biology](#); [Molecular Biology](#);

Formats available: HTML (English) : PDF (English)

Abstract

During recent decades, there has been a marked decline of the house sparrow (*Passer domesticus*) population in the United Kingdom and in several western European countries. The aims of this study were to determine whether the population is also declining in Spain and to evaluate the hypothesis that electromagnetic radiation (microwaves) from phone antennae is correlated with the decline in the sparrow population.

Between October 2002 and May 2006, point transect sampling was performed at 30 points during 40 visits to Valladolid, Spain. At each point, we carried out counts of sparrows and measured the mean electric field strength (radiofrequencies and microwaves: 1 MHz-3 GHz range). Significant declines ($P = 0.0037$) were observed in the mean bird density over time, and significantly low bird density was observed in areas with high electric field strength. The logarithmic regression of the mean bird density vs. field strength groups (considering field strength in 0.1 V/m increments) was $R = -0.87$ ($P = 0.0001$).

The results of this article support the hypothesis that electromagnetic signals are associated with the observed decline in the sparrow population. We conclude that electromagnetic pollution may be responsible, either by itself or in combination with other factors, for the observed decline of the species in European cities during recent years. The apparently strong dependence between bird density and field strength according to this work could be used for a more controlled study to test the hypothesis.

Keywords: Cellsites; Cellular phone masts; Decline; Electromagnetic fields; House sparrow; Microwaves; Non thermal effects; *Passer domesticus*; Urban bird populations