

Sharp decrease in sparrows caused by use of artificial grass in city parks

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Researchers at the Cavanilles Institute of Biodiversity and Evolutionary Biology of the University of Valencia as well as the University of Alicante have found a new reason for the decrease in the number of sparrows (*Passer domesticus*) in urban areas: the replacement of natural grass with artificial grass in parks. They have verified that in four years, the number of sparrows has decreased by 60%.

The common [sparrow](#) is a species that is associated with humans since Prehistory. However, since the beginning of the twentieth century, its population has fallen dramatically in rural and [urban areas](#) throughout Europe due to many factors such as urban pollution, a lack of space to nest, difficulties in finding food, diseases and predation. In central London, the species is now practically extinct, when in 1925 the chronicles speak about more than one hundred million specimens.

Edgar Bernat-Ponce and José A. Gil-Delgado, of the Cavanilles Institute, and Germán M. López, of the University of Alicante, explain that many European cities have undergone redevelopment processes in recent decades and the effects of this on urban biodiversity are hardly known. In an article recently published in the Urban Ecosystems magazine, they studied for four summers (between 2015 and 2018) the impact of replacing the soil of the parks (grass, bare soil) with other artificial components (concrete, artificial grass, areas for dogs, pavements) on the abundance of the common sparrow.

Of the 32 Valencian parks studied in four locations, major remodelling occurred during these four years in 10. In both types of parks, both remodelled and those that ultimately stayed the same, the abundance of sparrows was similar at the beginning. However, in those not reformed during this period the population declined by 15%, whereas in the ones reformed, there was an average decline of 60% in the same period, reaching a peak of 62.3% after the specific year of the reform.

Among the conclusions of the article, whose first signatory is Edgar Bernat-Ponce, it is clear that the remodeling of areas with grass or natural grass is more harmful to sparrows than in areas of bare soil. This is explained by the fact that in the Grass, the presence of invertebrates and seeds—foods—is much more likely than in areas with no vegetation cover.

In their study, the researchers also measured the distance between the parks, since the remodeling of an urban [park](#) could have caused the sparrows to move to a nearby one. With an average distance between parks of 370 metres, most of the birds that disappeared from those urbanised died or migrated to adjacent urban habitats, since it is a species with small roaming areas.

In their research, the three experts call for the implementation of new urban planning policies with the urgent need to preserve the common sparrow and other birds, although they are aware that the measures proposed by the municipalities have had the effect of reducing water consumption and the cost of the gardens. In this sense, they propose using native trees, or [grass](#) species with less water consumption for the parks, which would increase the number of invertebrates available for the livelihood of sparrows. They also suggest improving the urban green roof and connect it to help with the movement of birds.

More information: Edgar Bernat-Ponce et al. Replacement of semi-natural cover with artificial substrates in urban parks causes a decline of house sparrows *Passer domesticus* in Mediterranean towns, *Urban Ecosystems* (2020). [DOI: 10.1007/s11252-020-00940-4](https://doi.org/10.1007/s11252-020-00940-4)

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