

## **INTENSITY-DEPENDENT SUCCESS OF FERAL PIGEON POPULATION CONTROL BY CULLING IN BARCELONA CITY (CATALONIA, SPAIN)**

**<sup>1</sup>J. PASCUAL., <sup>1</sup>T. MONTALVO., <sup>1</sup>V. PERACHO., AND <sup>2</sup>J.C. SENAR**

<sup>1</sup>Servei de Vigilància i Control de Plagues Urbanes, Agència de Salut Pública de Barcelona, Barcelona, Spain

<sup>2</sup>Natural History Museum of Barcelona

**Abstract** Pigeon control actions in big cities are usually necessary to maintain the populations in such densities that do not generate conflicts with the human inhabitants. Pigeon control has traditionally been undertaken by culling. However, several papers have shown that this method might not be effective since it creates a gap in the capture locations that is rapidly filled by neighboring individuals. Nonetheless, many of these studies were based on culling actions over small or medium-sized cities, on culling over only some parcels of big cities or on culling over a small proportion of the whole population. In a former paper (Senar et al. 2009, *Arxius de Miscel·lània Zoològica* 7: 62-71) we showed that culling actions eliminating 227,479 pigeons from 1991 to 2006 (i.e.15,165 pigeons/year) were very few effective to the control of the whole pigeon population in Barcelona city, since the population increased from 183,667±14,914 to 256,663±26,210 individuals (CI 95%). Here we present the results of a study on the efficacy of culling actions from 2009 to 2014 over the same population, with an intensity of 42,363 pigeons caught per year, showing that the pigeon population dropped to 85,777± 10,028 individuals in 2015. These results clearly show that culling might be highly effective to the control of pigeon populations when its intensity is properly dimensioned. They also stress the importance of analyzing the effect of control actions over whole populations and not only to selected parcels in evaluation tests in order to overcome the influence of metapopulation dynamics.