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### **DON'T SIT AND WAIT, BUT STALK AND SHOOT – DOCUMENTING THE ATTEMPTED REMOVAL OF A MUNTJAC POPULATION THROUGH REM DENSITY ESTIMATIONS (ANTWERP, BELGIUM)**

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Chinese muntjac (*Muntiacus reevesi*) is a small deer of Asian origin. In the United Kingdom, a large population has developed that causes ecological and economic damage. To avoid a similar scenario on the European continent, muntjac is classified as a species of Union concern (Regulation 1143/2014). Indeed, muntjac is present in isolated populations in a few countries only. Our institute supports the removal of a muntjac population from a woodland park near the city of Antwerp (Belgium). Here, camera traps have been operational yearly during winter and spring for the past four years. Whereas population dynamics could only be assessed by Relative Abundance Indices (RAI) for the first two years (see Neobiota 2022, Estonia), we opted for a novel approach during the last two years (2022-'23 and '23-'24). Cameras were calibrated and animal movement was parameterized, to allow the use of Random Encounter Models (REM) that estimate population density. The management of muntjac in the park is a combination of shooting from high seats and ground-level stalking with thermal imaging. Management efforts were monitored along with camera-trapping. The cameras showed a well-established and healthy population of muntjac. Compared to known UK populations, the density is generally low (about 10 individuals per km<sup>2</sup>), but appears to fluctuate over time. Correlation with management is diffuse as density does not readily drop in response. Yet, the population seems to be in decline overall. This seems primarily due to increased efforts of stalking, which yielded higher success than shooting from high seats. Other processes remain to be assessed (e.g. natural mortality, migration). Whether current management flattens population growth (containment), turns the park into a sink (source-sink dynamics), or may achieve full eradication, remains to be seen. We are convinced that sharing knowledge and experiences regarding management is key to eliminate muntjac from mainland Europe.