

# Feral Wild Boar and Deer in the Forest of Dean

Population surveys in the  
public Forest Estate 2023

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## Introduction and Methods

The population of feral boar in the Forest of Dean has been monitored annually since 2013 to help inform the public as well as to support the management programme.

This report provides results up to and including the latest survey carried out during March 2023. Covid restrictions prevented completion of a survey in 2020.

The current survey adopted the same methods as previous surveys and covered almost exactly the same area (79.3 km<sup>2</sup>) as the previous survey in 2022. The survey was based on observations made using thermal imaging, with population estimates obtained using distance sampling<sup>2</sup>. This approach has proved effective in previous studies for estimating the abundance of wild ungulates in forested landscapes which offer limited visibility<sup>3-6</sup>. Observations were made at night between the 6<sup>th</sup> and 23<sup>rd</sup> of March 2023.

## Results

### **Wild Boar**

In total, 61 sounders were detected during the survey with an average of 3.85 boar per sounder (range 1-21). This represents fewer sounders but a larger mean group size than those detected in 2022 (2.86; n=76; range 1-9).

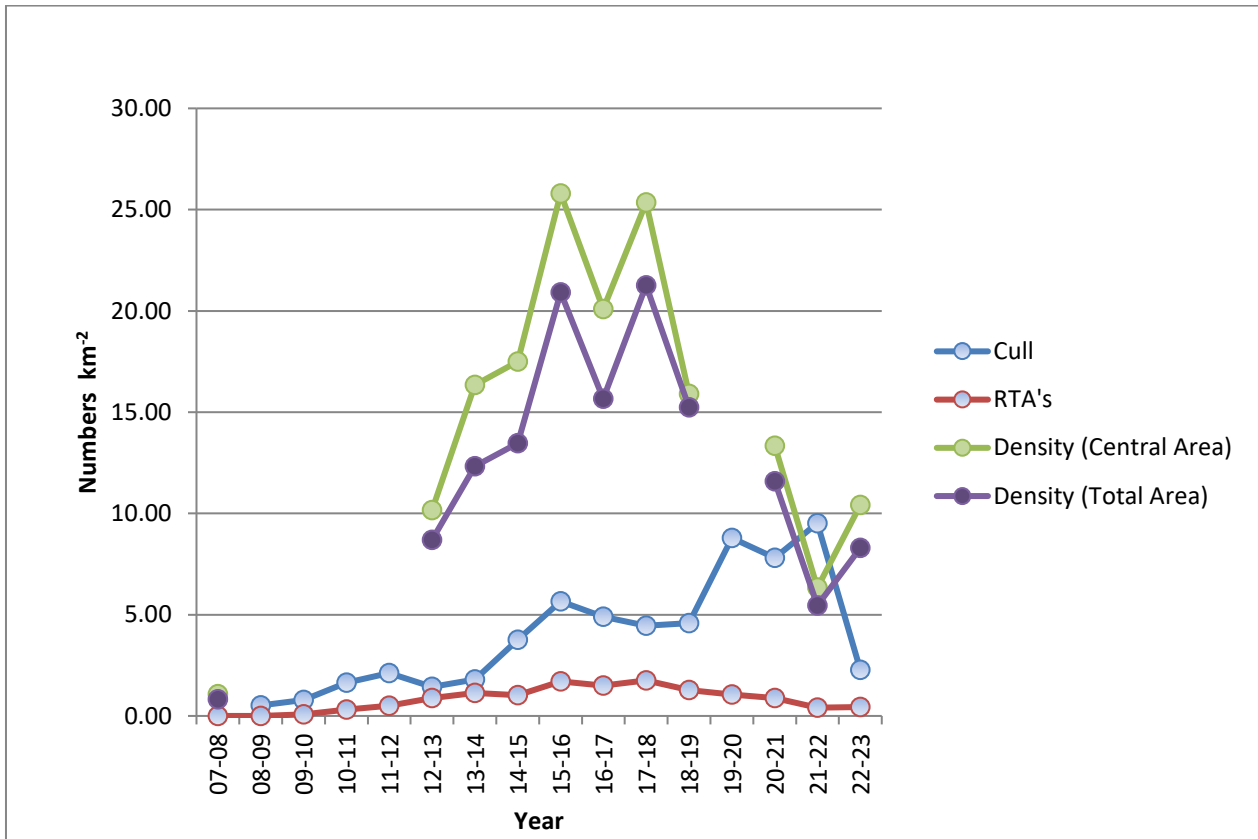
The estimated number of feral boar was 658 with a 95% confidence interval ranging from 389 to 1051, suggesting an increase since 2022 when the population was estimated at 441. However, the 2022 estimate is within the 95% confidence limits of the current survey so the significance of the increase needs to be treated with caution. The relative imprecision of the current survey is due to wider variation in group sizes.

The number of recorded casualties (RTA's) was 35, only slightly higher than 2022 when 33 were recorded. This figure includes both the number of recorded road casualties as well as animals found dead in the forest. The number of RTA's continues to show a close correlation with estimated population size (see figures 2 and 3).

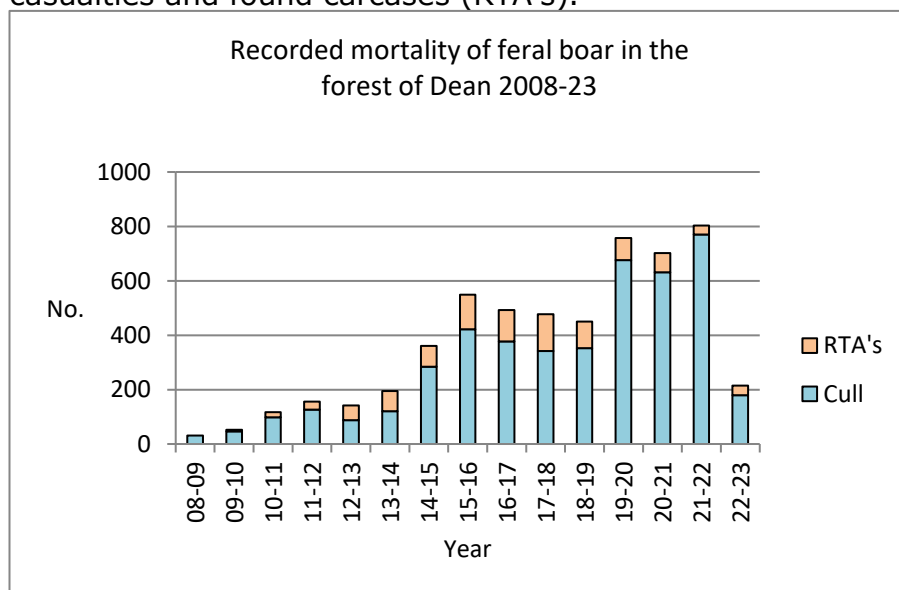
### **Deer**

The estimated total number of deer was 1661 (95% conf. interval 1360 -2028), a slight increase on the estimate obtained in 2022 (1347). The proportion of Fallow deer was 65%; 16% were muntjac and 20% were roe deer (see figure 4).

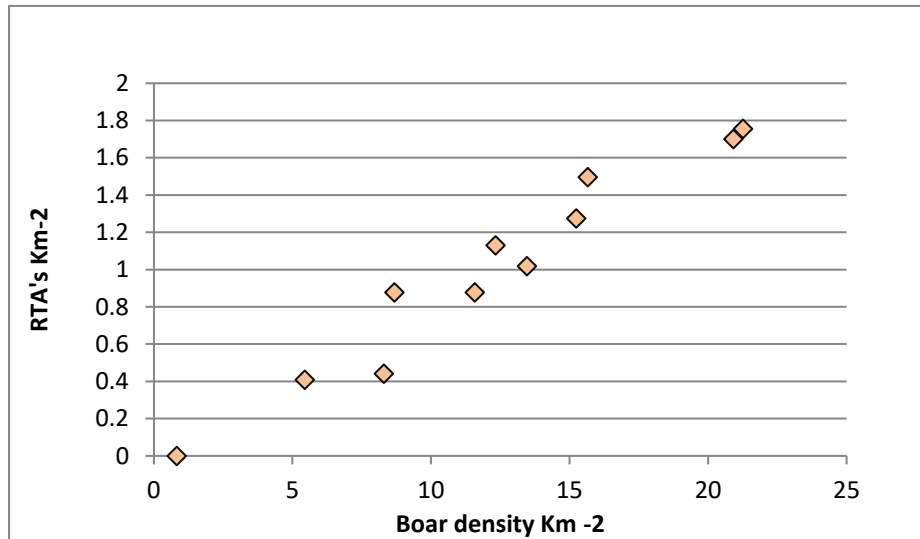
**Figure 1.** Trends in numbers of wild boar culled, killed on roads (RTA's) and population density 2008-2023. Figures are numbers per km<sup>2</sup>.



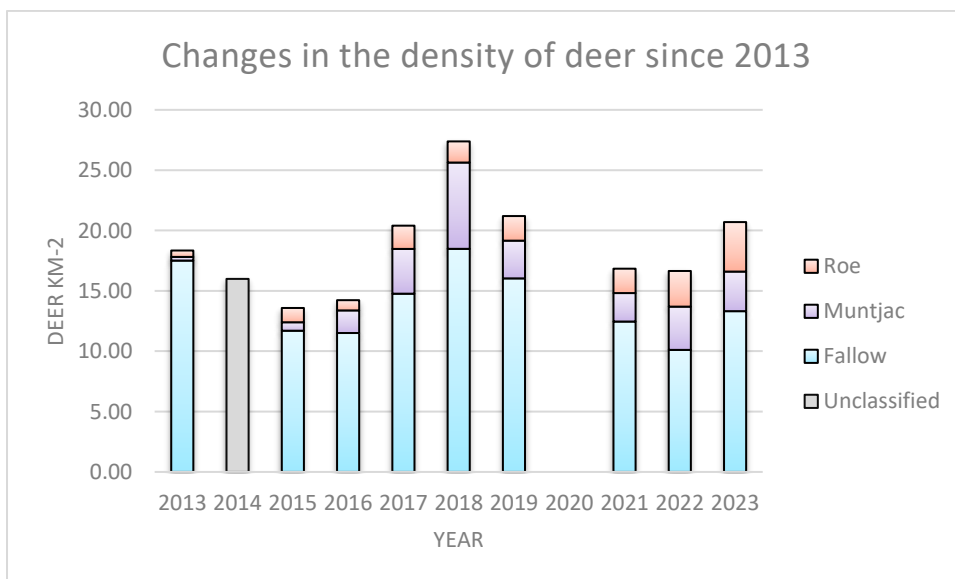
**Figure 2.** Trends in the number of feral boar culled and the number of recorded traffic casualties and found carcasses (RTA's).



**Figure 3.** Numbers of feral boar RTAs recorded each year (vertical axis) in relation to estimated population density (Both variables expressed as numbers per km<sup>2</sup> of forest area;  $r = 0.975$ ;  $p < 0.01$ ).



**Figure 4.** Changes in the density and composition of the deer population in the forest of Dean between 2013 and 2023.



## References

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- <sup>2</sup>Buckland, S.T. Anderson D.R. Burnham, K.P., Laake, J.L. Borchers, D.L. Thomas, L. (2001) *Introduction to Distance Sampling*. Oxford University Press, Oxford.
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- <sup>4</sup> Franzetti, B., Ronchi, F., Marini, F., Scacco, M., Calmanti,R., Calabrese, A., Aragno,P., Montanaro,P., and Focardi,S.(2012). Nocturnal line-transect sampling of wild boar (*Sus scrofa*) in a Mediterranean forest: long-term comparison with capture–mark–re-sight population estimates. *European Journal of Wildlife Research* **58**, 385–402. doi:10.1007/s10344-0110587-x
- <sup>5</sup> Gill R.M.A, Thomas M.L., Stocker D. (1997) The use of portable thermal imaging for estimating deer population density in forest habitats. *Journal of Applied Ecology*, **34**(5), pp 1273-1286
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