

Student report on deer impact monitoring surveys

In Langton West Wood

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Introduction

The Purbeck National Trust have contributed to a nationwide survey on all species of deer populations for a number of years now (National Trust, 2013). The surveys are conducted with the aim of keeping a current understanding of the different UK deer species, where their home ranges lie and the degree of positive and negative impacts of these species on their home range habitats and the surrounding areas in order to best decide how to manage the deer. Including how best to deal with the growing population of the invasive species of sika deer *Cervus nippon* (Sika Deer, 2009), which are particularly numerous around the isle of Purbeck. We were asked to conduct some of the surveys on behalf of Purbeck National Trust.

Methods

The survey was conducted on Wednesday 27th September 2017 between 12:15pm – 2:30pm in Langton Westwood on a damp day with full cloud coverage. Twenty Bournemouth University undergraduates were split into 4 groups and provided with survey sheets, handbooks, several maps of the area in different formats, clipboards and a GPS. It was required to bring suitable shoes and clothing, pen, notepad and a decent camera for photo references. The National Trust Deer Initiative - Woodland Impact Survey Recording form was used ensuring the data were recorded in a standardised way (Fig 1). Activity and Impact indicators including Deer Seen, Racks, couches and Fraying were counted using a tally and overall index scores were agreed for each indicator. The species of vegetation that were being browsed on were also noted and a percentage of browsing was estimated. A fixed point for photography was set into the GPS and transect routes had been mapped out corresponding to this point although flexibility was given to these routes if necessary to seek out deer activity. At the fixed point (e.g. SY 99268 79476) 8 photos were taken at different compass points (North, North-East, East...) to compile a well-rounded view of the surrounding area. Any other locations/indicators of interest were marked by GPS, photographed and recorded in additional notes.

Results

Deer activity and impact assessment

Date: 29/09/17 Site: L.W.V.I. Time spent: 0-15:15pm
 Recorder: Johnny Baldock Distance walked (m):
 Activity score summary (circle): N L M H Impact score summary (circle): N L M H

ACTIVITY					Score (N, L, M, H)
Deer seen	TALLY				N
Dung	TALLY				N
Clouchee	TALLY				N
Signets	TALLY				N
Walkovers	TALLY				N
Racks (in wood)	heavily used	lightly used	frequently used	heavily used	N
	TALLY	TALLY	TALLY	TALLY	
Racks (edge)	heavily used	lightly used	frequently used	heavily used	N
	TALLY	TALLY	TALLY	TALLY	

IMPACTS					Score (N, L, M, H)	
Bark removal or breakage	Flaying	TALLY			L	
	Bark stripping	TALLY			L	
	Broken stems	TALLY			N	
Browse/ste	Not obvious even on ivy	"soft", favoured species only	"hard", not con-favoured spp	"hard", mastal species		
	TALLY	TALLY	TALLY	TALLY		
	Coppice<2m (note species)	0-10% browsed, others reaching expected height	11-33% browsed, others reaching expected height	34-66% browsed, average height may be suppressed	67%+ browsed height suppressed	
	TALLY	TALLY	TALLY	TALLY		
Browsing (Noody shoots eaten)	Live basal shoots on coppice >2m or tree bole	0-10% browsed	11-33% browsed	34-66% browsed	67%+ browsed	
	TALLY	TALLY	TALLY	TALLY		
	Tree seedlings >10cm	no/late browsing, all heights present	<50% browsed, some >50cm	>50% browsed or none/few >50cm	>75% browsed or none/few >30 cm	
	Hazel					
	Redcurrant					
	Ivy					

Handwritten signature

Figure 1: The completed Deer activity and impact assessment recording form

(Note, please see separate file for photographs).

Discussion

Results for the number of deer seen did not reflect the predicted number of deer in the area. This could be due to the amount of noise disturbance the groups were making whilst conducting the survey. We also witnessed a dog walker with 3 dogs off the lead and this can cause deer to reduce their activity in the area, in some cases, for up to 100 metres due to the threat of predation (Lenth et al, 2008). Other examples were found of human influence on the deer populations including a balloon that was found within the woods that had been grazed on by a large animal (presumably deer). Clearly this has no nutritional value for them and could be harmful. This observation highlights the importance of reducing litter in areas where wildlife inhabits.

We were asked to critically evaluate the survey methods and results obtained. The survey, originally created by Dr Arnie Cooke (National Trust, 2013), could be limiting and subjective at times. There was no box for finding solitary slots or previously used racks. At one point of interest (SY 99300 79465) a tree had fallen over a rack meaning a new one had been created. It was unclear whether to mark this as one rack or two and there was disagreements within the group. Although quantitative data like this survey can be compared with others and compiled into data with ease, having more qualitative data can build up a more detailed picture of the total impact of deer in each tested area (Bryman, 1984).

The time of year these data are collected will make a big difference on the assessment. The male deer were just coming into rut (late September – late November) therefore there may not be as much evidence of fraying as there would be later in the season (Mitchell et al, 1976). There is also a variation in the types of flora eaten throughout the year. There was not much evidence of ivy being eaten while assessing as there was plenty of other food choices however evergreen ivy becomes a vital food source for deer such as Roe deer *Capreolus capreolus* during January until March (Jackson, 1980) There would hopefully have been more evidence of grazing of ivy in winter months and this could potentially lead to a more defined browse line.

The lack of expertise within the groups meant that some of the indicators will undoubtedly have been missed, especially as we were following a rough representative transect line rather than looking at every part of the woods. This is unavoidable in all surveys that sample only a part of wood however spending more preparation time familiarising ourselves with the different deer indicators could have reduced the margin of error.

Personal Development

This was a thoroughly enjoyable and educational task. I was able to learn some key skills needed for tracking and identifying the presence of deer such as the texture of their 'triangular' hair and the difference between racks and slots. In addition to specific deer skills I was able to work on many transferable skills. I improved my leadership skills of a small group, GPS handling skills, surveying skills and identification skills of British flora and fauna. The highlight of this fieldwork was the responsibility given to us from Purbeck National Trust, as knowing it was part of a nationwide survey made me even more willing to do the task to the best of my ability. If I had a chance to improve my experience I would have liked a lecture and the handbooks beforehand so that I would have had a better chance to prepare myself and be more familiar with the survey criteria however I understand this will hopefully be done for next year's students.

References

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