

## NGO ET & BDS Deer Management - Teaching Notes

The following notes are intended to provide a teacher or inexperienced lecturer with information to enable them to make better use of this PowerPoint presentation. How much detail to use is left to the discretion of the teacher/lecturer depending on the audience.

The intention is that this resource is suitable for use with 9-13 year old pupils but also contains sufficient detail to be of interest to older pupils and even adults who know little about deer or deer management. It is suggested that anyone intending to use it with junior school pupils (9-11 year olds) should give careful thought to how to best use the powerpoint presentation and worksheets.

Deer Management is a large and detailed subject and these notes are only meant to help deliver a summary talk/lecture. The notes and your own personal experiences may add to the interest but should not unduly extend any particular aspect of this coverage of the main facts and issues. However, some pages are, perhaps, more interesting to dwell on than others.

### Slide 1

Introduction – Ask pupils if they have seen a deer recently.

Where were they, how many were there, how big were they, had any got antlers, what shape were the antlers? Perhaps some of these answers will help us decide in the next few pages what deer they were.

### Slide 2

There are quite significantly different distribution patterns for these six types of deer. (For optional details of the distribution of each species left click with your mouse on the Distribution Maps button. If you wish to ignore these distribution maps simply go on to the next page.)

### Slide 3

Roe are found alone or in small family groups. They are the size of a large dog (Great Dane).

Reds in groups/herds – the groups are usually larger on hills and moorland (up to 100 or more) than in woodland and farmland (10-30). They are the size of a pony.

Both types of deer are said to be indigenous/native – they have always been found in Britain.

### Slide 4

Some Fallow may have been introduced by the Romans but they are also known to have been brought in by the Normans after 1066 in order to stock their 'Deer Forests' where they were kept for food and particularly for hunting/sport. Later they were kept in 'parkland' around or near stately homes. They are very recognisable by their palmate (flattened) antlers in the mature bucks (males). Over the centuries many have escaped and they are to be found wild across much of Britain.

Sika were first introduced to Britain in the mid 19<sup>th</sup> century but escapees have been very successful, surviving even in the poorest habitat, and they have quickly established themselves into local herds. They are smaller than both Reds and Fallow. Unfortunately they will inter-breed with Reds to produce

## NGO ET & BDS Deer Management - Teaching Notes

fertile hybrids- for this reason alone some people believe they should be removed completely but this would now probably be impossible to achieve.

### Slide 5

These are two examples of deer introduced relatively recently to safari parks/stately homes (particularly Woburn and Whipsnade). Both types of deer escaped into the wild and both bred rapidly to establish local populations quite quickly.

Muntjac arrived in the late 19<sup>th</sup> century and are already well established across southern England and are spreading into the midlands and out to the Welsh border. Their rapidly expanding population is causing concern. In many areas they are considered as pests. They are our smallest deer (size of a spaniel) and are often seen alone.

Chinese water deer are more recent arrivals and are only found as an expanding population around Woburn. They are larger than Muntjac and are often seen in small family groups.

### Slide 6

Red and Sika are large, impressive, imposing deer. Having antlers in the class/lecture room will be helpful for pupils to touch and experience texture and hardness. Perhaps comment on inter-breeding here rather than Slide 4.

### Slide 6&7

Why Stags and Bucks- it may seem confusing but these are traditional names. For those interested in it there is a wide and large glossary/vocabulary of traditional names/words associated with deer –many derived from local terms.

Male Chinese Water Deer do not have Antlers but both sexes have 'tusks' (as do male Muntjac). If the tusks are large enough to see it is a buck

### Slide 8

Hinds of both species are quite similar and are easily confused by the inexperienced. Colouration is not always as clear cut as in these examples.

### Slide 9

Typical distinctive heart/ horseshoe shaped pattern of fallow doe from behind gives an instant recognition feature avoiding confusion with 'lyre' shape of sika.

Again why hinds and does? – traditional names handed down.

### Slide 10

Many pupils and even teachers do not know that deer antlers are 'cast' –drop off each year- they have been so firmly attached almost up to the moment they go. Older animals tend to cast their antlers earlier

## NGO ET & BDS Deer Management - Teaching Notes

than younger ones. This is because they have greater size and weight of antler to grow than younger males. Cast antlers are often eaten/gnawed by a variety of animals, including deer, as a very good source of calcium.

This red stag has already lost one antler and the other will follow within hours/days.

Note it would be helpful to have a number of different antlers of varying size/age as teaching aids.

### Slide 11

Antlers grow from the outside- they are enclosed in velvet which carries extensive blood vessels- it is the fastest growth to be found in any mammal. If the velvet is damaged during growth the size and shape of the new antler may be affected.

Antlers usually increase in size each year until the male is fully mature but then may reduce ( 'go back' ) each year as he ages further.

### Slide 12

This is a period in which a lot of tree damage occurs as the deer clean and learn to use their new antlers.

### Slide 13

This period is known as the 'rut'-it is a time of the year in which even quiet, elusive deer become obvious and active, especially in the first hour or two of daylight.

It is a spectacular time of red stags roaring and antlers crashing. Not just the reds; the fallow and sika follow a similar pattern of behaviour. Roe, Muntjac and CWD bucks fight over individual does and such activities are likely to be less obvious.

### Slide 14

A time when the dominant stag can never rest- there are always rivals around the 'rutting lawns' looking to steal some of his females. Large stags can lose a lot of weight- they may run out of energy, become exhausted, in which case a new stag may challenge and defeat him.

### Slide 15

### Slide 16

The hind or doe will usually go off on her own to 'drop' her young in a quiet, secluded place. The first few hours after birth are critical for the survival of the young deer—they are licked clean, dry off, get to their feet and take their first all important suckle. The mother's milk in the first few hours after birth is particularly rich, especially in antibodies and is called colostrum. These are the hours in which the bond between mother and calf is established. This will be all important in the weeks to come when the mother starts to leave her young hidden away as she goes off to feed. Left alone lying still there is less smell on the young deer for predators to find them.

## NGO ET & BDS Deer Management - Teaching Notes

### Slide 17

Most young deer are born in late spring or the early days of summer—when the weather is most favourable, there is a good food supply and there is plenty of cover, especially for the calf to hide away. Healthy young deer grow very quickly and will be almost as tall as their mothers by the end of the year.

### Slide 18

In the first few days after birth most deer leave their young hidden away in some suitable safe spot—returning to and feeding them every few hours. It is safest for the calves (Red & Sika), fawns (Fallow) and kids (Muntjac and Roe)—also gives the mother a chance to feed herself and rebuild her fat reserves for Winter and for the new young embryo she will soon be carrying.

Slide 18 shows 1) Roe, 2) Fallow, 3) Sika, 4) Muntjac. Note the spotted coats of most newborn deer help with their camouflage.

### Slide 19

Why do we have a picture of a wolf in this Deer Management CD?

Pose the question what affect would a wolf population decreasing and eventually becoming extinct have on the deer population? There appears to be some evidence that the increasing deer population in the UK, resulting from the extermination of wolves, was then checked by starvation. However, the Agricultural revolution in Britain brought about an improvement in favourable habitat and increasingly more food in the form of farmers' crops which deer have taken advantage of.

An increase in the deer population results in an increase in the problems that they can cause.

### Slide 20

A golden eagle probably preys on Roe deer, especially young Roe deer but perhaps also small calves of Reds and Sika. A fox will also take new born Roe and Muntjac.

### Slide 21

The 3 statements come up one at a time on each 'click' so that they can be dealt with separately. Pose the question why is the British countryside favourable – what does it have to offer that deer need? Food, places to hide/lie-up, temperate climate. It is generally agreed that it is nice to see deer about the countryside – it is the numbers game- the balance between population and food resources that is the problem.

### Slide 22

Teacher can pose the question of what these 5 problems might be – second click brings up the list.

- damage to farmers crops and fences.
- damage to woodland, especially young trees
- destruction of favourite food plants, especially in areas of high deer population

## NGO ET & BDS Deer Management - Teaching Notes

- damage to household gardens
- road traffic accidents

### Slide 23

As yet no one has quantified this- no financial figures are available but the loss to some individual farmers and the national farming community is very substantial.

### Slide 24

To the trained eye the affect can be seen everywhere and anywhere that there is a high deer population—remember trees and woodland are a commercial crop.

### Slide 25

Deer selectively seek out food that is nourishing but also food that they like the taste of. Most deer selectively browse - eating out the new fresh growth. In some cases trees protected by plastic tubes keep on growing fresh tips but will never actually get out of the tube as deer keep on browsing them off. Fraying occurs as deer rub off the velvet from new grown antlers- also young deer practicing their antler skills. The damage caused by a 'bachelor group' of Reds or Fallow in a few days or even hours can be extensive (as seen on the previous page).

### Slide 26

In this photograph every bit of fresh vegetation has been grazed off or trampled by a high deer population on the side of the fence that the deer can reach.

This is a topic in which an in depth discussion can be promoted if appropriate to the audience.

The reduction in flora can have a significant affect on the insects (species and population size), in the woodland and, therefore, also on the bird or other species that might feed their young on those insects or seek to nest in the ground foliage. Food chains will be affected or even broken. Overgrazing by deer could quite drastically reduce bio-diversity.

The browsing of honeysuckle by muntjac in a Cambridgeshire woodland was shown by Pollard and Cooke (1994) to cause a decrease the number of potential egg laying sites for the White Admiral butterfly.

Deer are particularly fond of eating some types of plant and in areas of high deer population they could selectively browse to the extent that some flora species are completely lost in that woodland or even area. Bluebells and orchids have been lost in some woodlands overpopulated by muntjac.

### Slide 27

In the south of England deer, particularly Roe and Muntjac, like to invade gardens- again selectively browsing on their favourite food plants.

In the photograph the Roe clearly like the Japanese Maple and Runner beans but haven't touched the Azalea (covered in bright red flowers) in the background.

## NGO ET & BDS Deer Management - Teaching Notes

### Slide 28

As an example in the approximate 10 sq miles of Cannock Chase in Staffordshire there is a Fallow herd estimated to be approximately 800. Currently around 200 Fallow deer are killed each in RTA's - some years a large proportion of the cull is caused by RTA's and in such areas they should be taken into account when setting the cull plan. The more deer the greater the RTA problem.

### Slide 29

The injured deer is likely to be on or near a road. It is important to despatch it quickly and humanely, but also safely. A shotgun or a high powered rifle can be used- police hold a list of experienced practitioners in their area who are qualified to carry out the task.

Teachers should be prepared for questions such as why not call out a vet?—a vet will turn out if someone agrees to pay- time delay, RTA's are often at night—the animal is stressed-- humane to kill the animal as soon as possible - if it survived someone would need to look after it while it recovered and return it safely to the wild- if the deer is alive it is, potentially, still a **strong, dangerous** animal.

It is very important that dead deer should not be picked up by the public off the side of the road-- there is always the chance a vet may have put them down with IMOBOLIN or similar injection which could kill a human if eaten.

### Slide 30

Deer are tough animals and sometimes they survive RTA's with horrific injuries. This deer shattered a knee joint in a front leg which calloused up and healed. The severe injury is highlighted by the smaller right antler indicating an injury on the left side.( Note, unusually small antlers on only one side usually indicates an injury somewhere on the other side). This deer would have a distinct limp. A skilled stalker would notice the uneven antlers, observe the limp and cull out this buck as a high priority.

### Slide 31

Deer are healthy animals and disease is generally uncommon. Trained stalkers will look for and recognise an unhealthy deer. Such deer will have the highest priority in the cull. Having shot the deer it is important that the disease should be identified. Diseased deer should not enter the human food chain. If a major/contagious disease is suspected specimen organs should be sent for veterinary analysis. In this case the disease is T.B (tuberculosis), the obvious clue being the enlarged lymph gland in the neck. This carcass should be incinerated in an authorised unit. Another important contagious disease that stalkers should be aware of is Foot and Mouth.

### Slide 32

Entanglement is becoming an increasing problem, particularly in urban deer.

More and more litter is being left in the British countryside, especially by fly-tippers. Plastic bags, nylon ropes and other non-biodegradable products cause the greatest problems.

## NGO ET & BDS Deer Management - Teaching Notes

### Slide 33

It is important to decide/assess the damage to the deer without further distressing them. If the injury is serious it is better to shoot it immediately without going too close. It is important that an injured deer is not released for examination and then lost taking its injury with it. Remember, deer are strong and potentially dangerous animals and, if it is decided a healthy, uninjured deer should be released, it is best that this is carried out by experienced people.

### Slide 34

Originally there were two healthy Fallow bucks locked together and also tangled with a tree. One was successfully released before the camera recorded the release of the second.

### Slide 35

Perhaps explain what a cull is—this can be described as the removal of excess deer from a local population (agreed number of deer with consideration of age,sex etc). The first priority in any such cull should always be diseased or injured deer.

There are periods of 'closed season' when it is not legal to shoot/take a deer.

These statutory closed seasons have been decided mainly on welfare grounds, usually protected animals with dependant young, but they do vary depending on type/species and sex:-

	Male	Female
RED	1st May-31 <sup>st</sup> July	1 <sup>st</sup> April-31 <sup>st</sup> Oct
FALLOW	1st May-31 <sup>st</sup> July	1 <sup>st</sup> April-31 <sup>st</sup> Oct
SIKA	1st May-31 <sup>st</sup> July	1 <sup>st</sup> April-31 <sup>st</sup> Oct
ROE	1 <sup>st</sup> Nov-31 <sup>st</sup> March	1 <sup>st</sup> April-31 <sup>st</sup> Oct
MUNTJAC	No close season	No close season
C.W.D	1 <sup>st</sup> April-Oct31st	1 <sup>st</sup> April-31 <sup>st</sup> Oct

A decision has been made in 2008 to reduce the closed season on females by a month for Red, Sika, Fallow and Roe. Pose the question--In March the females will be quite heavily pregnant and no doubt experienced stalkers will avoid shooting them then if possible—So why has it been felt necessary to make this difficult decision?

### Slide 36

The cull should be carried out by an experienced, competent, qualified stalker. It is important to keep careful records of a cull to better inform future decisions making.

### Slide 37

Photographs show trainees receiving instruction on a British Deer Society Level 1 course. Those who pass the assessment day will be awarded their Level 1 certificate. There are further, higher courses –Level 2 and also Deer Management.

## NGO ET & BDS Deer Management - Teaching Notes

Details see BDS website. [www.bds.org.uk](http://www.bds.org.uk)

### Slide 38

Photographs show students at Newton Rigg College (University of Cumbria) studying on their deer modules in their gamekeeping or wildlife management courses. Most of them take their Level 1 certificate as part of the course. Details of all the colleges offering these courses are to be found on the NGO E.T. website. [www.gamekeeperstrust.org.uk](http://www.gamekeeperstrust.org.uk)

### Slide 39

Shows a few of the thousands of pupils of various ages who visit the deer section of the NGO E.T. exhibit at Countryside Live events. These events run are usually run by the Countryside Foundation for Education or the county Agricultural Societies.

### Slide 40

Stalking and deer management takes place in all types of countryside, even in semi-urban areas. Safety factors are paramount at all times.

If you can spot the deer and approach unseen it gives the stalker an opportunity to select the individual you need to shoot and also, perhaps, a second deer in case the opportunity arises to shoot two. Clothing is important –protection from any/all weather but also mainly camouflage- the stalker needs to blend in with surrounding habitat.

### Slide 41

The calibre/size of the high powered rifle with which it is legal to shoot a deer is controlled by law. The more magnification in the telescopic sight the bigger the image allowing an accurate shot to be taken but there can be more 'shake' on the image. However bigger scopes and binoculars are heavier and will often need to be carried all day.

### Slide 42

The teacher can get the pupils to suggest the possible advantages of a high seat:-

- The height gives the stalker a better view.
- Deer tend not look up, they look for danger at ground level and will even walk under an occupied high seat. Scent is not such a problem because they tend not to get 'wind' of the stalker when he is high above them –a problem which tends to be an important consideration when stalking on foot.
- Opportunity to observe deer while they are undisturbed and select carefully before taking the shot.
- A steady rest to take an accurate shot.
- Bullet is going down and will end up in the ground if the shot misses or more likely passes through the deer. Being in a high seat therefore allows culling in a 'flat' area that would otherwise be unsafe.



## NGO ET & BDS Deer Management - Teaching Notes

The biggest problem with high seats is siting them-potential good view, safe shot but also where the deer frequently use- you are static and the deer needs to come to you e.g. overlooking a crop that is being damaged.

### Slide 43

Some deer are shot in dense woodland or on wet or rough ground and if they are Reds, Sika or Fallow stags may be very heavy. It is important to consider how you are going to recover the deer before you shoot it and that you have access to the necessary resources e.g. quads, mules, 4X4 , tractors.

Most deer are 'bled' immediately which helps to reduce body temperature as soon as possible and also takes away much of the blood which is the first body part to degenerate. They are also often gralloched at the shot site. Explain gralloch-removal of stomach and intestine- important to stop contamination of the food and improve quality of eventual meat/venison. Gralloching can take place in the 'larder if the deer can be taken straight there. Either way it should take place within an hour (Defra recommend within 30 minutes) of shooting.

The health of the deer will be further assessed during this process and it is one of the reasons why culling should be carried out by competent, qualified people.

### Slide 44

From the moment it is shot a deer should be regarded as food that will enter the human food chain. Rules and regulations on meat hygiene should be adhered to in the field and in the deer larder. The carcase, usually in its skin, should be stored at 4-7C. If, in this process, disease in a deer carcase is suspected, particularly a contagious disease, then a vet should be consulted and, if substantiated the carcase should be destroyed by incineration in a DEFRA approved unit.

### Slide 45

It is rapidly being recognised, especially by the medical profession that venison is low in fat and cholesterol and is a particularly healthy form of red meat. Deer are selective browsers and only eat the best of what is available—much to the annoyance of local farmers. They are therefore very healthy animals and venison is as close to ORGANIC as you can get in the general British countryside.