

## CAIRNGORMS LOCAL OUTDOOR ACCESS FORUM

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### CNP Capercaillie Framework

#### **Draft Interim Conclusions – Work in Progress**

The following conclusions have been developed from analysis of data collated from various sources with a view to informing the recommendations coming out of Phase I of the Capercaillie Framework Project. These conclusions represent the range of data and analysis, of which there isn't a "most important" factor.

#### **Distribution and productivity**

- Based on lek records from 2003-13, Capercaillie numbers in Strathspey seem to be remaining reasonably stable. In Deeside the decline continues, although some encouraging signs were recorded this year ('14) with birds being seen again at Glen Tanar.

\*See Annex 1.

- Based on numbers of lekking males recorded during the 2013 lek period, the highest densities of capercaillie are found on Rothiemurchus, Glenmore and Kinveachy, with Inshriach, areas of Abernethy and the woods around Boat, Carrbridge and Grantown also having high densities. On Deeside, only the woods at Coilacreach are classed as having a high density. Levels of density is potentially subjective depending on where and when you compare, but from a Scottish perspective these were the areas that were assessed as having the highest density by the Capercaillie Project Officer for this purpose at this point in time. Densities were categorised as: Very high = >1 lekking cock/km<sup>2</sup>; High = >0.7 lekking cocks/km<sup>2</sup>, Medium = >0.3 lekking cocks/km<sup>2</sup>, Low = <0.3 lekking cocks/km<sup>2</sup>.

\*See Annex 2. for map.

- Distribution within these woods varies, potentially in accordance with human pressure e.g. highest densities throughout Rothiemurchus apart from the recreation honey pot areas around Loch an Eilien, concentrations in eastern parts of Abernethy and the periphery of Glenmore.

- Productivity (breeding success defined as number of chicks per hen encountered during brood counts) between 2009-13 was highest at Inshriach (1.22), Rothiemurchus (1.02), Kinveachy (0.95) and Glenmore (0.85) as well as woodlands at Carrbridge and Boat of Garten. Productivity was assessed for the main Speyside sites across this period continuously. The two sites at Carrbridge (Baddengorm and Tolquhonnie) and BoG do not have complete data across this time period. For the years we have data, they are more productive than anywhere else (2.72 at Baddengorm – 3 years data, 1.75 at Tolquhonnie – 4 years data and 1.85 at BoG) – 4 years data), but it is not a scientifically robust comparison due to the limited sample. Methodology and dates for collation of brood data is not consistent across sites. This needs to be standardised for greater accuracy and comparison in future.

- How are things changing over time? GWCT analysis of adult, hen and chick densities across three of the key sites at Glenmore, Kinveachy and Rothiemurchus highlights at how, over two time periods (2003-07 and 2009-13), the caper populations have changed both in numbers and distribution. This provides a very up-to-date analysis of where is currently most important and enables for a direct correlation to be made with any land management changes that may have been undertaken on the ground.

### **Impacts of human disturbance**

- An increasing body of research indicates that capercaillie avoid areas with high levels of human disturbance and can be excluded from otherwise suitable habitat. The recently published Robert Moss research (Moss *et al*, in *Wildlife Biology*, 20(1):1-18. 2014.) is the most comprehensive and relevant research pertaining to this. Therefore, the number of capercaillie that the forest networks of the CNP can support is likely to be reduced in certain areas due to human activities.

- Capercaillie will avoid using open woodland habitat next to tracks, if the tracks are well used, by about 125m either side of the track. This data is borne out by the data collected as part of this project. The threshold for how frequently a path needs to be used to have this effect is not known.

- Caper can be attracted to forest tracks to drink from puddles and to ingest grit, particularly on paths that are not frequently used. Based on anecdotal evidence, this can make them vulnerable to sporadic, unpredictable disturbance, particularly by dogs, which could lead to fatalities.

- There is a lack of info/data on people numbers, where they go, what they do, etc. As a result, professional expert opinion is essential for assessing the data while a programme of people-monitoring is put in place. This is based on anecdotal evidence from what people on the ground think are human pressures, rather than by people counter, camera trap or visitor survey data. Although not scientific, this has been agreed is the best approach we can take until a more scientifically robust system is adopted.

- There are a range of activities that could potentially be impacting on caper. Dog walking is probably most significant, but there is also a need to focus other potentially damaging activities such as orienteering, mountain biking (including at night) and snow-shoeing or cross-country skiing in winter (especially in extremely cold weather). The impact of these activities is not known and some work is required to assess further. Birdwatching is also potentially significantly impacting on capercaillie, as birders attempt to get their "tick". This is particularly relevant when there is a known rogue bird in an area. Increasing numbers of people are coming to see and/or photograph these rogue males, and whilst this spectacle can prevent people from searching across entire forests, there is potentially significant harm that could be caused to the individual bird and to local populations. There are potentially serious animal welfare implications of approaching rogue males (as has been demonstrated at Rothiemurchus and potentially Abernethy this year) as well as a real risk of wider disturbance to other birds, particularly females, in the vicinity.

## Access Management

- If people or their dogs regularly wander off tracks, capercaillie can stop using these areas. The mapped data shows that where there is lots of activity, lots of desire lines and off-track activities happening (albeit anecdotally assessed) i.e. near communities, then there are very few caper records despite good habitat e.g. Carr plantation or Ellan woods in Carrbridge. Capercaillie likely modify their behaviour based on the frequency of disturbance, distribution of tracks and extent of available habitat.
- Keeping people on tracks can allow caper to become habituated to predictable disturbance and allow them to use adjacent habitat (as evidenced at Rothiemurchus).
- Screening along tracks can further help with habituation and can potentially reduce the distance of avoidance, making more habitat available to caper. This has been documented previously in the scientific literature and can be seen to be occurring when looking at the caper distribution data. This appears to be more effective at sites away from communities, possible as people are using the paths to get to a specific destination.
- The more tracks in a forest, the more fragmented the habitat becomes, resulting in capercaillie being excluded from a significant amount of otherwise suitable habitat. It is impossible to disaggregate vehicle tracks, desire line walking routes, mountain bike routes etc due to proximity to each other e.g. SW Anagach or woods around Nethy Bridge/Lower Dell Woods, Carrbridge paths, etc.
- There is a lack of consistent messages on signage across the CNP relating to caper and dogs and what is expected of visitors. This includes different messages and different dates, which leads to confusion. There is also a need for improved messages to visitors before they arrive.
- The Caper BAP Group/LOAF agreed dates for the sensitive period for caper is currently 1<sup>st</sup> April – 15<sup>th</sup> August.
- Dog walkers need areas to allow their dogs to be exercised off-lead. Signage asking people to keep dogs on lead is likely to be less effective if there are not clearly identified alternative areas where they can go. Within the wider countryside, identifying where people can go is as important as informing people where they can't.
- There is a need to work closely with land managers to identify, in accordance with their management plans, where current sensitivities are and therefore where it is most suitable for people to go. Infrastructure and communications to direct people to suitable areas are essential. This has to involve the recreational users in the process as it cannot be assured that people will use infrastructure if it does not meet their recreational needs.
- The current Ranger staff allocation doesn't adequately cover all the "at risk" sites across the CNP. Caper woods at Grantown, Aviemore and Carrbridge do not have a regular Ranger presence. Rangers need to be deployed consistently across the "at risk" areas if reinforcement of behaviour-change messages is to be achieved.

## Awareness

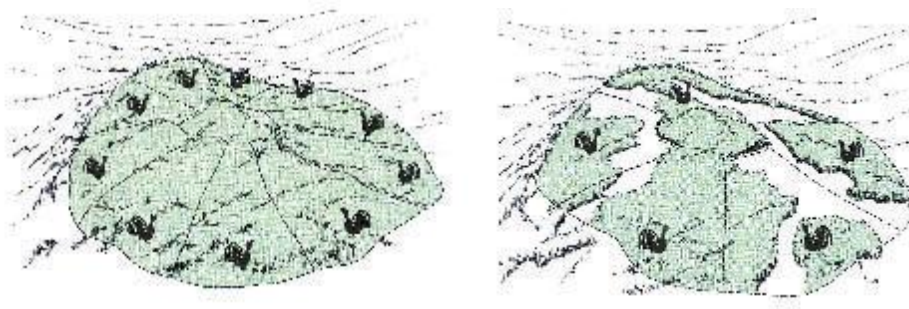
- Based on anecdotal evidence, capercaillie have developed a negative reputation with some residents of the CNP. This is mainly as a result of some restrictions that have been imposed e.g. dogs on leads, or as a result of ill-feeling following the amount of money spent during the Life project. While these reasons are easy to defend against and certainly do not encompass everyone (there are many people that dearly value caper), there is a need to improve people's appreciation of the species and the importance of the area nationally for the population. The Boat of Garten example has demonstrated that people are much more likely to respond positively to what they know and understand, and is an approach which could be widely replicated .
- Communities of interest (bike groups, dog walkers, activity providers, tourism based businesses, photography groups) have a significant role to play in how people view the area and how they behave. There is a need to work closely with them to ensure that consistent and accurate messages are put out to ensure appropriate behaviour is adhered to.
- Access takers are increasingly obtaining information by personal recommendation through social media. Therefore any attempts to change established behaviour will need to be proportionate, easily explained and easily understood if it is to have any chance of success.

## Developments

- There are a range of Communities that, due to the proximity of the woodland/caper habitat to the people and the increase in housing planned, require a focussed effort similar to Boat of Garten (although BoG could possibly be considered atypical as a community). These include Grantown, Aviemore, Carrbridge, Nethy Bridge, and potentially Kinncraig.
- Tourism development has potential to influence caper fortunes within the CNP and will need to be assessed as part of development considerations.

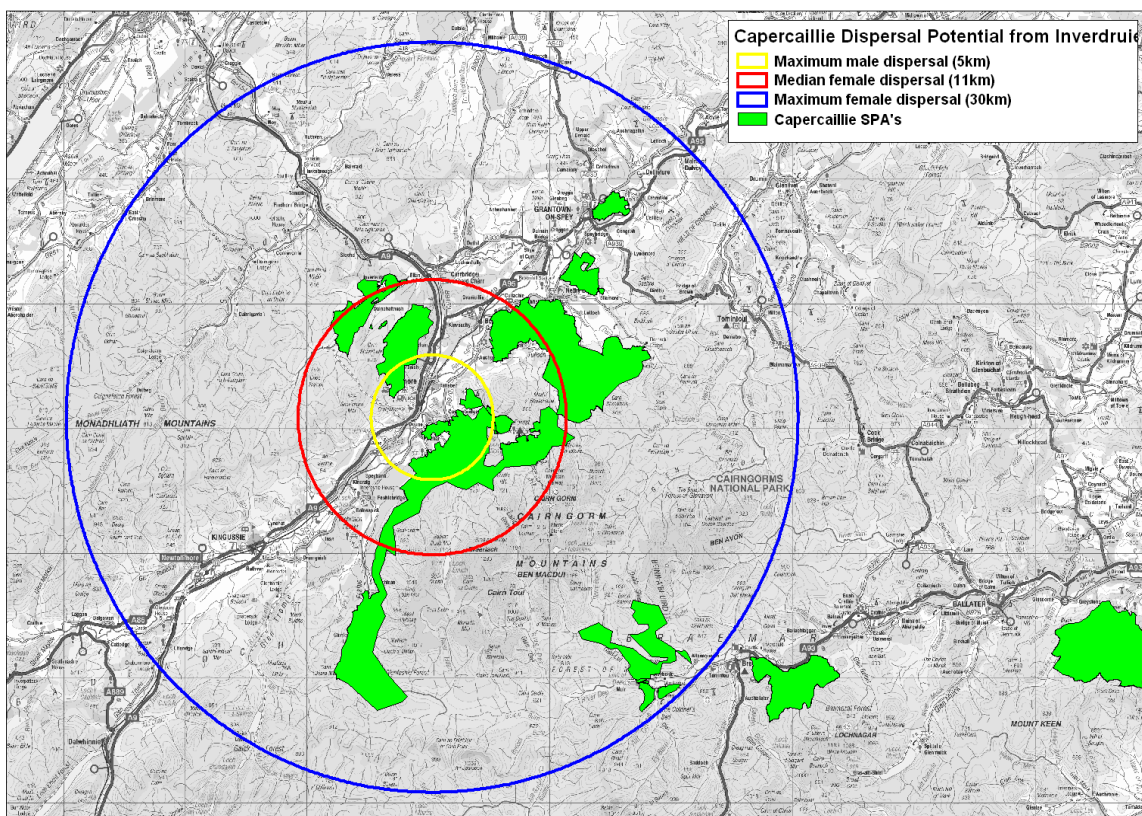
## Available habitat

- Fragmentation of habitat is known to reduce the number of males at a lek – see diagram below (copied from Per Wegge). The current range within Strathspey has a significant amount of edge which can negatively affect caper e.g. increased incursion into woods by predators. To reduce edge effects there is a need for increasing the size and connectedness of patches of habitat that are available to caper to create refuges of continuous habitat



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- There are a range of previously occupied sites where the habitat has become unused. These need to be identify and the reasons for change addressed.
- The Natura Network could be managed more proactively as a suite of sites across Strathspey. Site Condition Monitoring is for a fixed point and is to protect the designated feature, but more could be done over a shorter period to expand the available caper habitat. Much work has been undertaken (through SRDP and SAF) to improve habitat in and around some SPAs, but the creation of a proactive management plan could significantly help with the creation of refuges and expanding habitat away from human disturbance. SNH have already started this process which could be moved forward as a priority within the Strathspey metapopulation.
- Designating new areas could potentially help boost the effectiveness of the wider habitat network and ensure its long term protection e.g. Carrbridge woodlands. This could be through the expansion of the Natura Network through to the development of Local Nature Sites.
- As a result of the demonstrated effects of disturbance, the creation of more good quality habitat in areas without human pressure is likely to be beneficial.
- Dispersal – the documented dispersal of caper in Scotland from their natal area is as follows: Males: 5km (max.); Females: 11km (mean), 30km (max)



For the purposes of ensuring connectivity between areas, high quality woodland stepping stones should be situated no more than 5km apart to allow dispersal movement by males.

## **Predation**

- Predator control is known to be undertaken at Kinvechy, Inverlaidnan, Rothiemurchus and less intensively at Abernethy and Craigmore. Predator control is not undertaken at Glenmore, Inshriach and Anagach. The status of predator control activity is not known at other caper sites. Control of foxes and crows is generally cited as a beneficial action to help limit the effects of low productivity. But there is a range of differing opinion and evidence on the effects of predation on caper productivity locally, particularly stemming from the Glenmore and Inshriach examples. The general agreed conclusion is that predator control is very likely to be a beneficial activity.

- Pine marten predation – much focus is pinpointed at the impact of martens on caper. The Framework acknowledges that this is a potentially significant issue that needs to be properly researched, which is not being undertaken as part of this work. Any findings that do emerge from future research will be incorporated as part of the adaptive nature of the Framework.

## **Forest Management**

- Forestry management is a very important consideration as much of Strathspey is due for thinning or extensive felling in the near future. An inventory to ensure it is done in ways that considers the significance for the metapopulation is needed. There is potential that these fellings could impact the integrity of the SPA network. Although FCS regulates, they are not comprehensively considering the cumulative impacts. It has been recently agreed (at a recent meeting looking at forest activities outside SPAs that could affect caper SPAs) that the Caper Officer would be consulted to assess the potential impacts. A review of existing Forest Plan felling proposals as well as seeking information from those areas not covered by forest plans to assess the likely spatial impact of felling over the next 20 years would also be beneficial.

- Good quality forest management guidelines already exist from the Caper Life Project and continue to be promoted widely. These have proved successful and their promotion should be continued.

- Fences – It was estimated that caper would likely have gone extinct in Scotland without addressing the threat posed by forest fences. Calculations have also suggested that caper would not have declined in Scotland where it not for fence collisions. Breeding success in the presence of fence mortality must be greater than 1.1 chick/hen for the population to be self sustaining. Without fence deaths productivity need only be 0.6 chicks/hen. The Scottish Executive funded FCS Challenge fund followed by the EU Life Project resulted in extensive areas of fences being managed to reduce their threat to caper, either through removal, marking or reducing of deer fences to stock fence height. But marking or reducing fence heights only reduces risk of mortality (by c.50-65%) rather than completely removing it. There are still fences that should be removed or if still essential, marked appropriately. Some marked fences are in need of repair/re-marking as they have become weather damaged over time and are again posing a significant risk.

- FCS have produced a comprehensive fence marking guidance note which should continue to be promoted as best practice.

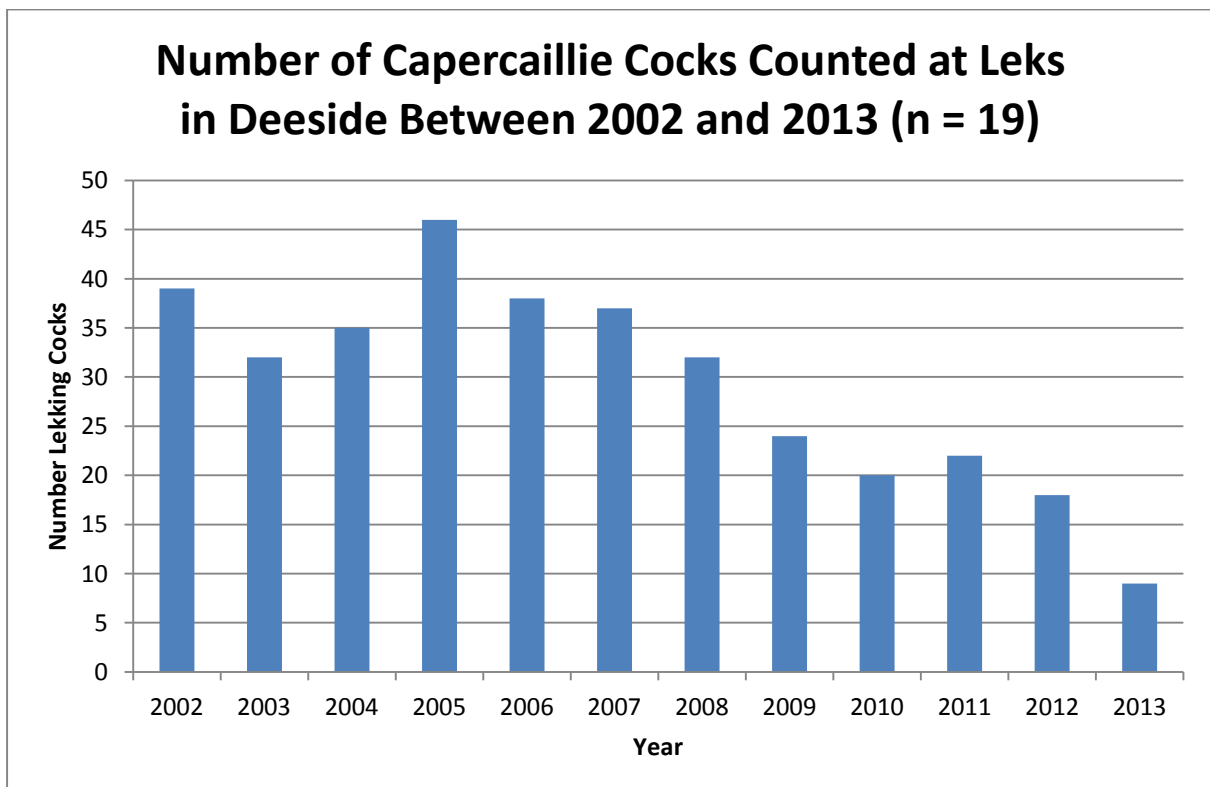
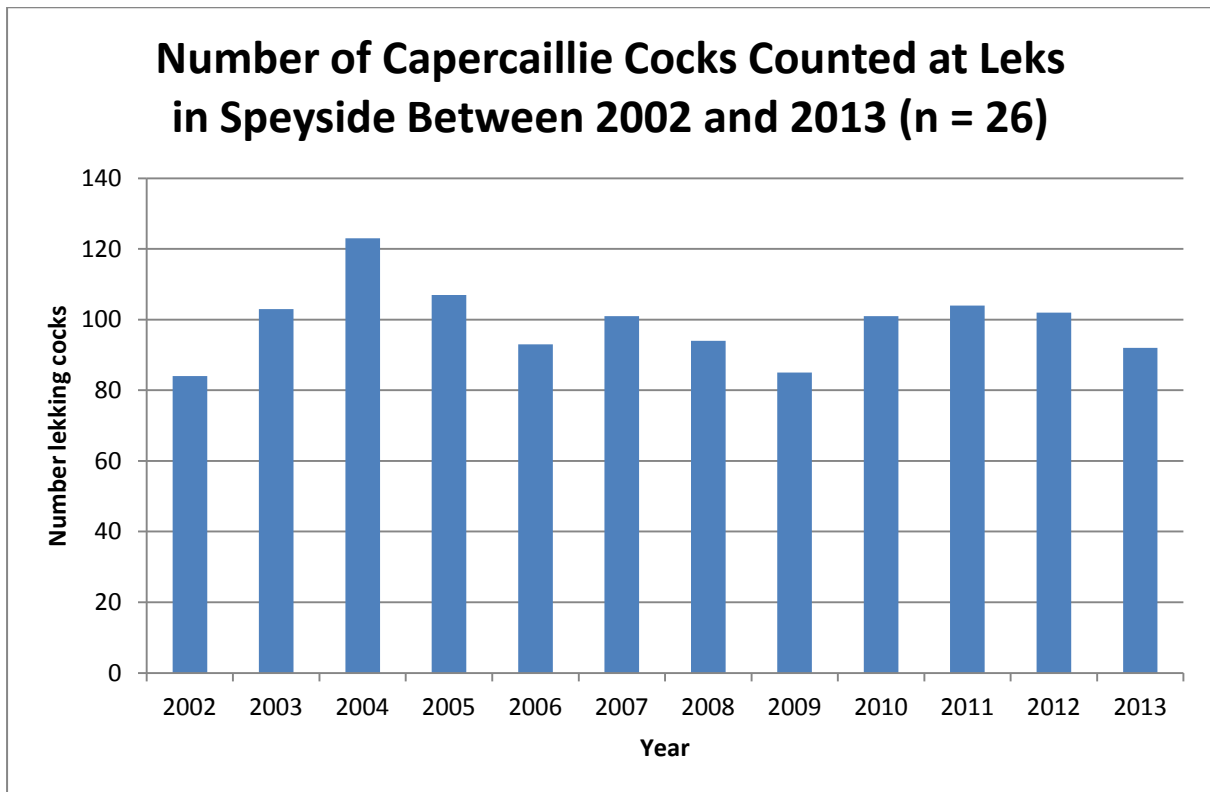
### **Deeside specific Issues**

- Human disturbance is not thought to be of major significance in Deeside. There are other issues that are more pressing e.g. deer management and fence marking/removal. Also the woods tend to be much drier, so creation of wet patches may well be very important. It is essential that we keep Deeside in as part of the framework but highlight that concerted effort will be needed to retain a viable number of birds.

- There is a general feeling that the low numbers of birds present in Deeside will make it unlikely for caper to recolonise areas where habitat management has been undertaken that would otherwise benefit the species. Dispersal distances and lack of connecting habitat limit the potential for Speyside birds to occupy these areas and therefore back up this anecdotal hypothesis. Captive breeding has been suggested as an option.

### **Other Issues**

- There is a need to consider management issues on a site by site basis. A factor or combination of factors that are of significance at one location may be of little significance at another and vice versa.





Annex 2. Capercaillie density in occupied woodland in Strathspey

