

## **Ornithology from the Tree Tops**

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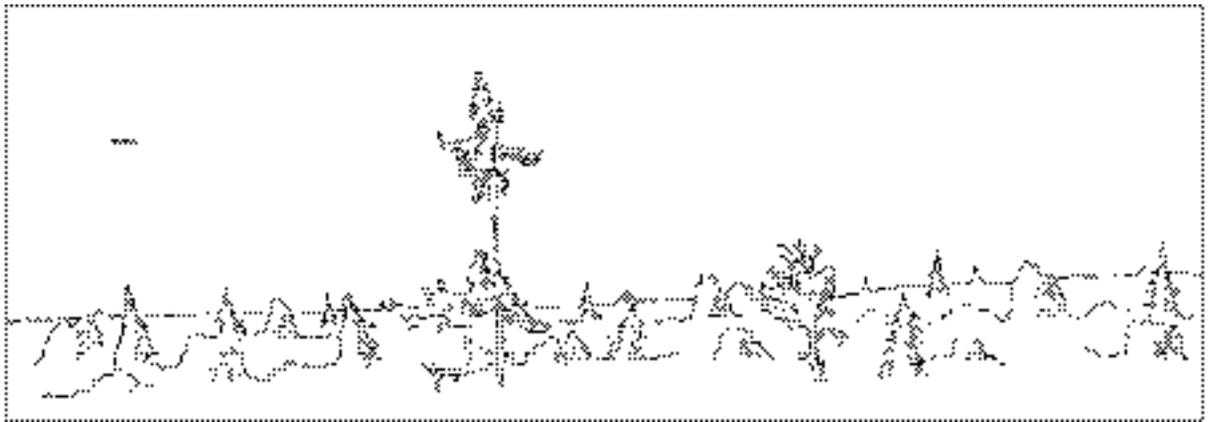
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## Ornithology from the tree tops

The easterly sky lightens up, although the sun is still below the horizon. It is cold, but who cares. Singing larks are sprinkling the sky, invisible Stonechats voice their scrappy warbles... I am waiting for Black Grouse to start their other-wordly bubbles and hisses. On this military training ground near Ede, Black Grouse are much earlier risers than the soldiers who practice rifle shooting between nine and five (with a noon break). Entering these training grounds is not permitted, but doing so nevertheless, makes the trip even more exciting. It is early in the 1970s, the heaths are still adorned by a scattering of grouse. Alas, at present the species is ecologically extinct, despite some diehards which serve as a tourist attraction on the Sallandse Heuvelrug (or Hautes Fagnes and Lüneburger Heide, for that matter, the breeding sites nearest to Salland but too far away to enable exchange).

So far, nothing new under the sun. Our world is in rapid transmission. Some species are able to cope with environmental change, other species disappear, yet others thrive and expand their range and numbers. Black Grouse are among the losers, and have been for some time. The reasons are multifarious, but relentless habitat change has had the greatest impact. At first, small-scale farming in the first half of the 20th century, in combination with a decline in sheep numbers on heathland, had catapulted numbers into the thousands. But ongoing habitat changes, especially fragmentation of heathlands and intensification in farmland, set the scene for a decline. Present-day western European populations are small and live far apart, leading to loss of genetic diversity (Larsson *et al.* 2008). Chick mortality is high, and yes, every now and then a hungry Goshawk swoops down and removes one of the few remaining anachronisms from the heath. To save the Black Grouse from extinction, drastic measures were

needed, i.e. the capture and removal of 'the' Goshawk responsible for killing Black Grouse. Nothing easier than to capture a Goshawk. It didn't matter that the capture was completely random, that nobody knew for sure which individual was taken, that another Goshawk would fill the gap, that Black Grouse would continue to decline because none of the major causes for the decline had been tackled successfully (Bijlsma & Jansen 2010). Predator control is presumed necessary, no matter what, a classic reaction of conservationists who are desperate to do something, anything, to stop the decline of a preferred species. A search through the literature might have learned otherwise. On two moors in northern Germany, for example, some 430 Black Grouse were introduced between 1980 and 1993, and concomitantly at least 742 Goshawks were removed (mostly killed). The result: Black Grouse extinct, and Goshawks only started to decline *after* killing them came to an end (Busche & Looft 2003). Nevertheless, our Ministry of Economic Affairs, Agriculture and Innovation gave permission to continue capturing and translocating 'the' (sic) Goshawk from the breeding haunts of Black Grouse on the Sallandse Heuvelrug, up to and including 2016. Not surprisingly, the decline of Black Grouse continues to this day.

Dutch conservationists have a knack for focusing on lost cases. When numbers are still high and suitable habitats abound, and a child can see the trouble ahead, few are interested in research or protection. Preferably, we wait till the point of no return has been crossed, and then start expensive programmes to save a species from extinction. Or better still, wait till extinction has materialized, and then start reintroduction programmes. The latter tactic was recently chosen for the Hoge Veluwe, where Black Grouse have been extinct for quite some time. In this National Park, famous for the

Kröller-Müller museum with its large collection of Van Gogh paintings, 139 Black Grouse were introduced in 2007–09, all of them bred in captivity (the latter a scenario for trouble in itself). Of 31 birds tagged with a transmitter, 19 were found dead, often within two weeks of release. The cause of death was attributed to predation in eleven cases, mostly by Goshawks (Bos *et al.* 2010). Given the long-term Goshawk study in neighbouring Planken Wambuis, this result was hardly a surprise. In fact, had the staff of Hoge Veluwe read the papers on these Goshawks, they would have known the outcome beforehand and might have saved a lot of money by not even contemplating the reintroduction. Goshawks on Planken Wambuis, and theirs is a fate shared by those breeding in the entire Veluwe region, showed an upsurge in numbers in the 1970s following the bans on persistent pesticides, reaching an average density of 30 pairs/100 km<sup>2</sup> in the 1980s. Their breeding performance was excellent, with very few non-breeding pairs, large clutch sizes and high reproductive success. Then, non-breeding became more common, clutch size declined, and the number of territorial pairs almost halved. These trends were preceded and paralleled by a substantial drop in avian biomass, notably in main prey species like Woodpigeons, Racing Pigeons, corvids and Starlings. Since the mid-1990s, only about 30% of avian biomass was available as compared to the 1970s. This radical drop in food availability was a response to changes in farming practices and acidification of the forest ecosystem. Even a versatile predator like the Goshawk can be limited by food supply (Rutz & Bijlsma 2006). The remaining pairs have diversified their diet, a necessary adaptation to a dwindling food resource. At present, Goshawks prey on a wider variety of prey species than during the heydays in the 1970s and 1980s, including many species weighing less than 50 grammes. Also, intraguild predation has increased substantially, up to the point that species like Sparrow-

hawk, Hobby, Kestrel and Long-eared Owl have disappeared as a breeding bird (either via direct predation, or a habitat change of the smaller raptors).

With this knowledge in mind it is no surprise that reintroduction of the perfect prey species, the Black Grouse, in a habitat where food-stress has had such a profound impact on a generalist predator, is doomed to fail. But the truth is even more sad than that: without Goshawks, the grouse would also have declined into extinction, as their habitat is still unsuitable to carry a self-sustaining grouse population. The suggestion to step up the number of grouse released into the wild in order to increase the chances of successful reintroduction (Bos *et al.* 2010) reminds me of the game management of Pheasants. When the ban on releasing Pheasants, hundreds of thousands each year, was imposed, numbers on the Veluwe quickly dropped to virtually nil. Unsuitable habitat after all, hence no chance of survival without a never ending supply of novel birds. Is this what we are planning to achieve with Black Grouse?

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