

VISION FOR THE UPLANDS: LESS MANAGEMENT PLEASE!

James Fenton 18 August 2016

This is my strategic vision from a nature conservation perspective for land above the head-dyke in the area north of the Highland Boundary Fault within the agriculturally-defined Less Favoured Areas.

This area still retains significant tracts of land where the vegetation pattern has never been determined by humans, *i.e.* ecologically wild land with a high degree of naturalness. In global terms, the remaining natural areas of the planet have the highest nature conservation value. The ecologically wild areas also tend to be those with the minimum of artefacts (tracks, buildings, infrastructure), although the number of artefacts is continuing to increase at an alarming rate.

Hence my vision for the uplands is ‘to let them be wild’, through:

a) Maintaining ecological wildness by a reduction of management over the remaining wild areas, from both nature conservation and moorland management interests.

b) Maintaining ‘recreational wildness’ by ensuring there are still wild areas without any artefacts present.

Expansion of my ecological vision a) is given below.

Ecological history of the Highlands

I am often met with scepticism when I argue that the Scottish Highlands throughout most of their history have never been managed, albeit used to a greater or lesser extent: such areas of Europe, where the landscape pattern has never been modified for any particular human use, are incredibly rare – and becoming increasingly so globally.

It is a common call of rewilders and others (starting with Fraser Darling) that the Highlands are a devastated landscape, its ecology destroyed by centuries of deforestation and overgrazing: this is in spite of very little evidence in support of this. Certainly there is likely to have been more human impact on upland landscapes in the more southern parts of the UK, but here I am restricting my observations to the Highlands.

Hence I was interested to read recently in A R B Haldane’s informative book *The Drove Roads of Scotland* (page 210):

“When cross-country droving on a large in Scotland on an appreciable scale first began, and for many a year thereafter, a great part of the Highland and upland areas of the country was common land, or at the least land which, while nominally owned by the local chieftain, was in fact unused and uncared for. In the earliest rentals for Islay and Kintyre, for example, the figures representing the total of the ‘merk lands’ held by the tacksmen from the local chieftains do not amount to more than about one-third of the total extent of these areas as shown on modern maps. The rest was wasteland which was gradually merged into the tacksmen’s holdings with the progress of agriculture. The process by which this great unused area was absorbed into the holdings of tacksmen or their sub-tenants was a gradual one, and not until sheep farming on a large scale became common in the Highlands were these upland areas put to fuller use than for the grazing of cattle from the shielings in summer and early autumn.”

Haldane’s “wasteland” is what we would now call ‘wild land’. Roy’s maps of 1747-1752 show how rare woodland was in the Highland landscape in the era before large-scale sheep farming. In some areas there was slightly more woodland than now, in some areas slightly less, but it is remarkable how unwooded the Highlands were at this time. Roy’s maps are available on the [National Library of Scotland’s website](#). Taylor, the ‘Water Poet’ from London who visited the Highlands in 1618, tells us that inland woods had no commercial value owing to their inaccessibility [there were no roads or bridges then]: so they are unlikely ever to have been felled or managed. He also indicates that there

were significant numbers of red deer in the Cairngorms area as well as wolves. It would appear that later, in the 1700s, there was a period of particularly low deer numbers in the hills, perhaps because during all the uprisings many were forced into the hills and killed deer to stay alive?

Before the 1750s sheep were wintered indoors, with most grazing carried out by cattle, which were brought down from the shielings by the end of September. Domestic stock before the eighteenth century probably would have consisted of the small, black Highland cattle, small breeds of sheep, goats and a few horses, although “such records as there are indicate that the numbers are not large” (quote from Steven and Carlisle 1959, *The Native Pinewoods of Scotland*). In the summer there is generally an excess of plant production in the hills, meaning there is plenty of grazing for both livestock and deer; hence before the middle of the eighteenth century, in winter there would only have been red deer (and wolves) in the hills.

The era of large-scale sheep farming has been relatively short-lived in terms of the ecological history of the Highlands, and the average density of sheep would only have been 0.5-1 *per ha*, which is low in agricultural terms (and in any case sheep are only likely to have displaced deer); and the period of rotational burning of heather on grouse moors even shorter: burning has not created these moors.

So why was woodland so rare in the landscape at the time of the Roy maps in the 1750s? It certainly cannot be put down to sheep farming, grouse moor management, tree felling or absence of wolves. So are we not damaging the remaining naturalness of the ‘wasteland’ in trying to convert into something else?

Current vogue to design the vegetation pattern of the hills

It is perhaps only since around 1900 that humans have consciously chosen the vegetation pattern for a given area of the unenclosed uplands (*i.e.* above the head dyke). But it is unclear why conservationists nowadays want to reduce the naturalness of the vegetation by aiming for given vegetation patterns. Surely the area is best left to be ecologically wild, *i.e.* to let nature determine the vegetation pattern?

My vision for the uplands is to maintain ecological wildness through a reduction of management over the remaining wild areas, by both nature conservation and moorland management interests.

Note that adding trees to the landscape, as well as reducing the naturalness of the area, also contributes to global warming: “The albedo of forested land is generally lower than that of open land because the greater leaf area of a forest canopy and multiple reflections within the canopy result in a higher fraction of incident radiation being absorbed (from an IPCC Working Group report 2007).” Hence, although trees do temporarily remove carbon from the atmosphere, it is possible that their lower albedo overrides any carbon storage advantage; additionally, planting trees on organic-rich soils can also cause release of soil carbon to the atmosphere. Shallow areas of peat or organic-rich soils have the greatest long-term potential to act as carbon sinks.

Associated with the human desire to design the vegetation pattern, in particular to increase woodland (or heather) cover, is the current concept of ‘overgrazing’ because deer grazing can keep tree cover low. However if grazing levels in natural systems are ultimately determined by food availability, then the concept of ‘overgrazing’ becomes meaningless, and we should ask ourselves why we are so determined to increase tree cover (*i.e.* prescribe a given vegetation pattern). In the past when soils were more favourable to tree growth, trees took less time to grow above browsing height, and so woodland was more likely to persist in the landscape. In an area of nutrient deficient soils and ecologically unsuited to thorny shrubs, nowadays, many thousand years after the end of an ice age, we would expect a largely open landscape. Creating a new network of trees through this landscape results in fragmentation of the existing natural networks of open ground.

In terms of trampling damage to peatlands in particular, SNH research indicates no correlation between herbivore density and the extent of erosion.

Necessary ecological action

The exceptions to non-intervention management would be:

1) **The control of invasive non-native species** where significantly more action is needed. In my view the nature conservation value of the Highlands would be much higher if all the effort of recent years had been targeted at the unglamorous work of rhododendron control, rather than new woodland creation which tends to reduce the overall ecological integrity of an area – removing the unbroken ecological continuity back to the Ice Age.

2) **The filling-in of moor grips** (ditches in peat), *i.e.* restoring damaged peatlands. However I would be wary of trying to revegetate eroded areas in the round because the majority of eroding peatland in the Highlands is likely to represent a natural stage in a long-term cycle. Preventing erosion might be good to ameliorate climate change, but does reduce the overall naturalness (nature conservation value) of the peatland. Society has to decide whether keeping some areas natural (ecologically wild) is a higher priority than reducing carbon loss to the atmosphere.

3) **Reintroduction of species definitely made extinct by humans.** We must be wary of simplistically reintroducing all mammals which once lived in the Highlands. Woodland species in particular are likely to have declined to extinction with the gradual natural reduction in woodland cover over the centuries; it is possible, though, that humans merely hastened the extinction of some of them. Returning such species is akin to zoo-keeping rather than retention of the naturalness of the ecosystems. Perhaps only the wolf is a clear-cut example of a mammal unequivocally made extinct by humans and which should still be here, because, like red deer, it is a species with a wide ecological amplitude: Greenland wolves, for example, exist in a landscape without trees. However it is probably also the case with the beaver where there would always have been places with enough trees, such as Argyll. The evidence of the past 10,000 years of vegetation change indicates that bringing back the wolf will not significantly increase the woodland cover through causing a reduction in deer numbers. However it is not politically possible to reintroduce the wolf at present.

It is the lowlands that need our conservation management ...

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