



# Wilderculture: the future of food

*Wilderculture is a new integrated approach to ecological restoration and food production on upland areas, as Caroline Grindrod explains.*

**W**ilderculture is considered the new kid on the block of land management. What we do is simply pull together established principles of ecology, traditional farming methods, new developments in soil science and regenerative agriculture, then we craft culturally respectful ways of applying these in upland landscapes. Our work fully considers the 'triple bottom line' of social, economic, and ecologically sound outputs rather than narrowly focusing on ecological restoration alone. We believe that unless land management is inspiring to the owners, accepted by the local community, and economically viable, then it is not truly sustainable. And it is fair to say that we are a big fan of trees.

When it comes to land management we seem to have short memories. Every generation assumes that the management of the generation before is 'how it's always been done'. But before the uplands of England and Scotland were flooded with sheep and deer, the soils on our hills looked very different. Historic game and livestock records show they were a lot more productive too. We can

Above, left to right: Fell ponies at Wilder Gowbarrow; Cattle on Wilder Carna; Wilder Southannan. Photos: Caroline Grindrod.

predict reasonably well what habitats will emerge on particular geology in certain climatic regions, but nearly all of these assumptions are based on the results we get under 'set stocked' livestock management, which has been the increasingly adopted methodology of livestock management for the last century or more in the UK. We call this 'natural.'

Across the world, where regenerative agriculture has been adopted on millions of acres of land, we have learned conclusively that allowing livestock or wildlife to graze continuously on the same piece of ground is highly destructive to soils. It leads to a slow but significant loss of productive capacity as well as a simplification of biodiversity. We get a glimpse of this in Sir Frank Fraser Darling's West Highland survey, conducted between 1944 and 1951, which refers to anomalies in some native remnants of woodland where the soils and associated plants are not what we would expect from the underlying geology. I believe these are the remnants of our truly 'wild' soils.

The leaves of many grasses are base rich and co-evolved with roaming herbivores so do not have the ability to defoliate in the ways trees do—

they need periodic grazing with long recovery periods to thrive. Deciduous tree leaves also contain important deposits of calcium and magnesium which play a critical role in maintaining a favourable pH in soils. When our uplands were a mosaic that included grassland habitats and many more trees, the aeration and pH of the soils would, in many places, provide the perfect conditions for earthworms and other important soil organisms to continue to engineer healthy aerated nutrient-available soils. These minerals would pass through the entire food web to support a wide range of life—mineral cycling is often overlooked as a significant limiting factor for biodiversity.

## Soil assaults

The first assault on soil health in the uplands was probably as long ago as when early humans hunted large herbivores into extinction, and killed off the natural predators of smaller herbivores, such as deer. The reduced complexity of grazing and browsing behaviour, which was compounded by the lack of rest and recovery, could easily have led to a loss of vigour and degradation of soil health in the temperate savanna-like habitats that covered much of the area. Follow this with a cool climate and





reduction in alkaline tree leaf litter caused by continued deforestation and the soil pH would likely have tipped towards an acidity that can no longer support most earthworms and many microorganisms associated with healthy productive soils. In the absence of macro and micro soil organisms, along with the aggregation created by mycorrhizal fungi, the soil structure collapses into far less productive acidic and peat-forming processes. The plants that thrive here are those that do not form mycorrhizal associations and as a result are poorer in nutritional quality.

The second assault was when we shifted from more traditional farming methods, where there was probably in the region of 20 sheep to every cow in the uplands, to favouring highly selective grazers, such as deer and sheep. When we stopped grazing cattle in the uplands, conditions deteriorated to the detriment of the soil. Without the presence of predators, these selective grazers become 'super' selective, seeking out anything palatable and nutritious until it disappears from the sward—saplings included. At first, the remaining fertility of the upland areas may have been partially maintained by proactive shepherds, herders and stalkers who understood the importance of rest and recovery in grassland habitats, the importance of nutrient uplift to high ground, and the resulting benefits to sward and animal health.

Many traditional herders in other parts of Europe still continue to

be guided by this ancient wisdom and traditional practice, however in the UK, over time and perhaps influenced by a highly supportive subsidy system, the more commonly adopted grazing management practice has been a 'set stocked' ranching of vast areas with sheep and or deer. When grass plants are grazed short—which often occurs in a set stocked management system—their roots can no longer come into contact with the underlying rock. With no microbial pathways to supply plants with nutrients, the plants can only uptake nutrients from the almost entirely depleted soluble pool. In a self-perpetuating cycle, the only plants that thrive in such circumstances are those with a tolerance for the denuded landscape that remains. These plant communities are what we are accustomed to seeing in our uplands today.

This process of denudation is accelerated on steeper slopes and in wetter climates. In these environments, when the soil structure collapses through the onset of the above processes, the rainfall further leeches any remaining nutrients and washes them quickly into the rivers and seas. We are left with dead, low-successional soils. No wonder any tree other than the pioneer species have a hard time thriving in these environments!

### **What is natural?**

In response to the negative effects of set stock grazing, we assume that rest (from grazing and browsing) is more natural than the overgrazing we

so often encounter. But we neglect to attach enough importance to the impact that animal itself—not just its grazing—has on the ecological processes. This is no defence of overgrazing and the few remaining pockets of remnant forests or native habitats are certainly a lot closer than most to what probably once covered the UK prior to agriculture—and thank goodness for the heroic efforts of those who save it—but is it truly 'natural'? Would it not also have been grazed and bashed about by heavy herbivores, periodically turned over by wild boar—the wild beasts being alert, bunched in small mobs and kept rapidly moving by large predators?

The differences this would have made to the ecosystem processes are huge and are very different to what can be achieved by a few sedentary conservation cattle. Just think how much grass, shrub and browse must have been eaten, and the minerals released through the dung and trampling, the effect of those dead and decaying bodies, the difference in soil function, the deadwood and disturbance created by large galloping herbivores. Imagine how much more energy (through increased photosynthesis) would be available to the food web from optimal (not rank) rest and recovery periods of the field layer, facilitated by the threat of pounce or pack. Would we really have such large areas of organic soil-based habitats such as heath and bog, or would there be a far higher percentage of grassland habitats in the open glades?





Many are calling for the reintroduction of large predators in an attempt to recreate these missing functions, but how soon will the UK be ready for these missing species—lynx, wolves and even bears? Can we really afford to wait that long? Will this process alone be enough to recreate these missing functions and regenerate our depleted soils? We need to restore all of our wild places now and if there comes a time in the future that it is right to consider reintroductions, then at least we may have a habitat that is fit and ecologically functional, and a society whose culture has grown to appreciate trees and ‘untidiness’ in our upland landscapes.

Perhaps it is time to accept that every inch of the UK has been on a continuum of change from the beginning of time and stop arguing over what is really ‘natural.’ What matters is what we want to achieve for people and planet now, to realise the two are completely inseparable, and to ensure it is economically viable so that private landowners will

adopt it on a massive scale. We also have the rather pressing issue of a rapidly expanding global population who must be fed. We are part of one global ecosystem with a single atmosphere and shared oceans. To prioritise nature conservation in the UK over food production with the vague hope to ‘outsource’ our food from intensively managed and rapidly desertifying ‘ghost acres’ is not a great long term plan!

By separating land management into ‘those who produce food’ and ‘those who want to protect nature’, we have created a toxically divided countryside and are significantly hampering progress at a time when we cannot afford further delay. We can and must do both. This gives humans an important ecological function too, perhaps it is time to drop our destructive habits and to take up a role as a modern keystone species—carefully learning the language so that we can become a part of their, and our, regeneration.

In our Wilderculture work, we are working towards a truly integrated approach where we blend

regenerative grazing, agroecological plant production, and rewilding to produce food and fibre as we restore biodiversity and ecosystem services. We believe that the sum could be greater than the parts. Through our projects and partnerships, we are developing and refining our techniques. We hold regular open days and offer training and consultancy in our methodology, and will be advertising walks, talks and training in Scotland over the coming year. You can sign up for updates on our web site.

In the 20th century, we separated and categorised almost everything, including land management. The 21st century must reverse this and build relationships and mutual understanding between farmers, foresters, estate owners, conservationists and rewilders. We owe it to the future.

**wilderculture.com**

*Caroline Grindrod is a regenerative agriculture consultant and co-founded Wilderculture. She is the lead trainer, project manager and developer of the Wilderculture approach.*

Above, left to right: Cattle on Wilder Carna/ Wilder Southannan; Woodland grazing/Betony. Photos: Caroline Grindrod.