Plantlife

Position statement

Rewilding

July 2019

‘Bringing nature back to life – that’s rewilding’

‘Rewilding is the large-scale restoration of ecosystems where nature can take care of itself

‘Rewilding seeks to reinstate natural processes – for example, the free movement of rivers, natural grazing, habitat succession and predation. It is not geared to reach any human-defined optimal point or end state. It goes where nature takes it’

Rewilding Britain

- In the midst of the current debate around rewilding, the three statements from Rewilding Britain overleaf help to define the ambition. Plantlife has been '**bringing nature back to life**' since our inception 30 years ago, with a particular focus on our wild flora and fungi: wild flowers, lichens, ferns and mosses. Increasingly, we have been doing this through **large-scale landscape restoration** projects, nearly always in partnership with other conservation NGOs, private landowners and both local and national government. This allows for meaningful conservation across a significant area of habitat – conservation that **reinstates natural processes** – such as the **introduction of grazing animals** in internationally important woodlands or the removal of choking carpets of marram grass planted on our **naturally dynamic** sand dunes. The end goal is always to reinstate former more dynamic, natural conditions allowing the biodiversity within those landscapes a chance to thrive once more. We believe that where wild flowers lead, wildlife will follow.

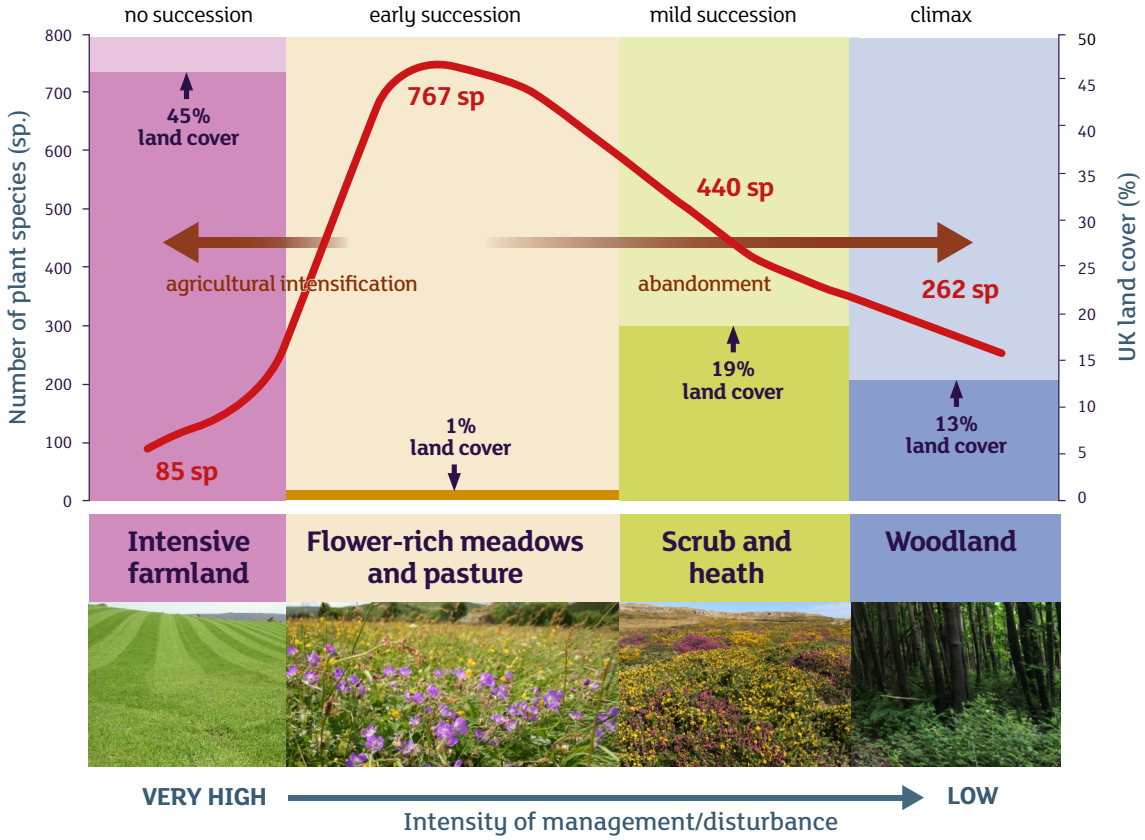
- The final part of the definitions above is around '**natural succession**'. One of the most compelling aspects of the national conversation around rewilding is the potent idea of nature taking the lead. Natural succession in the UK – particularly in the lowlands – leads almost inevitably to woodland. The myth of the wildwood still grips the national imagination but evidence increasingly supports the idea of a mosaic of habitats such as might be found today in the New Forest – a biodiverse area of woodland, bog and open heathland, roamed freely by horses, pigs and donkeys. The resulting mosaic of habitats supports truly dynamic ecosystems with enough animal movement to keep areas open and sunlit which benefits plants.

    - Rewilding in the UK can bring huge benefits to wild plants and fungi. Animals help move plants around the landscape and their grazing and scouring create the nooks and crannies into which plants can seed. Such landscapes tend to have more micro-habitats for plants to find their place and softer transitions between habitats encourage more interactions between plants and animals.

- But new research by Plantlife highlights a risk to plant diversity where rewilding is interpreted as land abandonment i.e. the removal of all management; letting nature take over but not introducing enough natural processes such as herds of free-roaming herbivores. This scenario is unlikely to deliver sufficient levels of grazing and disturbance to support plant diversity.

- This is because most plants prefer open habitats flooded with sunlight. The 'succession paradox' – a decline in plant diversity as more shaded scrub and woodland develop – can put our most botanically diverse habitats and most threatened species at risk if we abandon land or don't maintain sufficient levels of disturbance (see below).

Change in total flowering plant diversity as intensity of land management and disturbance is reduced and succession takes place



- New analysis by Plantlife shows that more than half of all wild plants need regular management or disturbance to thrive; 611 (39.6%) species will decline within a decade if the land on which they grow is simply abandoned and 127 (16.4%) will decline within 1-3 years. Moreover, of 112 Critically Endangered and Endangered UK vascular plant species, 84 (75%) will decline or even disappear if land is abandoned. Land abandonment and under-management is now identified as one of the major threats to sites where Red Data List plants grow[1] and to open habitats in the UK and across Europe[2] .

- Our research also shows that open, managed habitats such as grasslands, meadows and arable fields (early succession habitats) are botanically very rich – home to 767 species – but cover just 1% of the UK land area. By contrast, scrub habitats (mid succession) are poorer (440 sp) but cover 19% of land area, while climax woodland is poorer still (262 sp.) but covers 13% of land area. Intensively managed farmland is the poorest of all, supporting just 85 species, but covering 46% of land area.

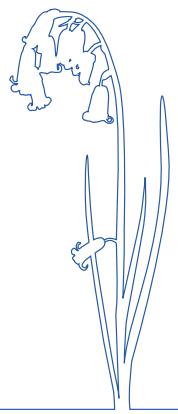
- The succession paradox equally applies to bryophytes (mosses and liverworts); 848 species grow in open, sunny situations such as grasslands, dunes, bogs and mires, while just 517 grow in scrubby habitats and 464 in dense woodland.

- For other taxa the picture is more complex, although structural diversity, including bare earth and high botanical diversity, is vital to sustain healthy populations of most species. Just walking away from formerly productive landscapes doesn't achieve this. For example, many invertebrates such as mining bees, wasps and beetles require areas of completely bare and open substrate (sand, gravel and soil) for their life cycle, which can be difficult to deliver if grazing and disturbance are too low.

- Rewilding can be synonymous with the introduction of charismatic predators such as wolves or lynx, yet some of our most important keystone species are plants. As important as any grazing animal, yellow rattle (*Rhinanthus minor*) is an ecosystem engineer that is pivotal in the creation of wildflower meadows. A semi-parasite, it reduces grass growth by 40-60% thus providing other plant species room to grow. Being an annual with short-lived seed, it quickly disappears from intensive pasture and silage fields but can return just as quickly when fresh seed and sympathetic processes are reintroduced. Similarly, sphagnum moss has been reintroduced to degraded and damaged peat bogs to dramatically increase their return to functioning ecosystems with full carbon-capture and water-regulation capabilities.

- Different approaches to 'bringing nature back to life' are required in different landscapes. Government advice, support and regulation for farming and other land management should be flexible and responsive to this. When delivered at sufficient scale, this can create a diverse mosaic of habitats, from early successional to climax woodland, across whole landscapes through a range of natural processes such as the movement of herbivores, flood or fire, storm effects in forests, erosion and deposition by rivers that are functionally connected to their floodplains.

- In the majority of the lowlands, the focus should be on species gains that can be delivered through full or partial reductions in farming intensity and the re-establishment of habitats, preferably with clusters of farms working together to reduce fragmentation to achieve bigger results. In the uplands, there is more scope for a considerable reduction in sheep and deer grazing and the reintroduction of mixed grazing allowing natural regeneration to take its course in developing scrub and woodland.



- Our collective ambition for 'bringing nature back to life' will be best realised if we understand the succession paradox and how this could affect the restoration of our most species-rich, open habitats. It is hard to see how the traditionally managed wildflower meadow – an extraordinarily species-rich ecosystem – could survive under a rewilding scenario. And perhaps this is where conservation projects will always have a place alongside the vision of rewilding. Plantlife is calling for an ambitious restoration programme of species-rich grassland, which now comprises just 1% of our land area through the creation of 120,000 hectares by 2043, a modest increase of 0.5% compared to the current woodland afforestation targets of 12%.

- For woodlands, rewilding should focus on improving the quality and diversity of our existing woodlands through grazing and traditional management to provide open rides, clearings and transitional zones that support the maximum species diversity. Establishing woodlands through natural regeneration should be considered the preferred approach but must not impact on important open habitats. Neither should woodland planting be targeted at marginal farmland that has high potential for wildlife-rich open habitats.

Change in total flowering plant diversity as intensity of land management and disturbance is reduced and succession takes place

- Intensively managed farmland hosts fewest species but occupies the largest area of land (46%).
- Early succession habitats such as flower-rich meadows and pasture (lower intensity management every 1-3 years) host most species but occupy the smallest area (1%) and are further threatened by current trends in agricultural intensification and abandonment (e.g. undergrazing, tree planting).
- As succession proceeds, species diversity drops as scrub habitats develop (low-intensity management every 3-15 years) reaching its lowest level in climax woodland (unmanaged or managed every 15+ years).
- Resources should be targeted on intensive farmland to redress this balance, especially in the ambitious creation of species-rich grasslands that once covered 12% of our land area.

Data from https://nora.nerc.ac.uk/id/eprint/9535/1/PLANTATT.pdf, http://uknea.unep-wcmc.org/ and https://www.forestry.gov.uk/pdf/Ch1_Woodland_FS2017.pdf/$FILE/Ch1_Woodland_FS2017.pdf

[1] Walker K, Stroh P & Ellis B (2018). Why are some plant species more threatened than others? BSBI News 137: 3-9.

[2] http://ec.europa.eu/environment/nature/knowledge/pdf/terrestrial_EU_red_list_report.pdf