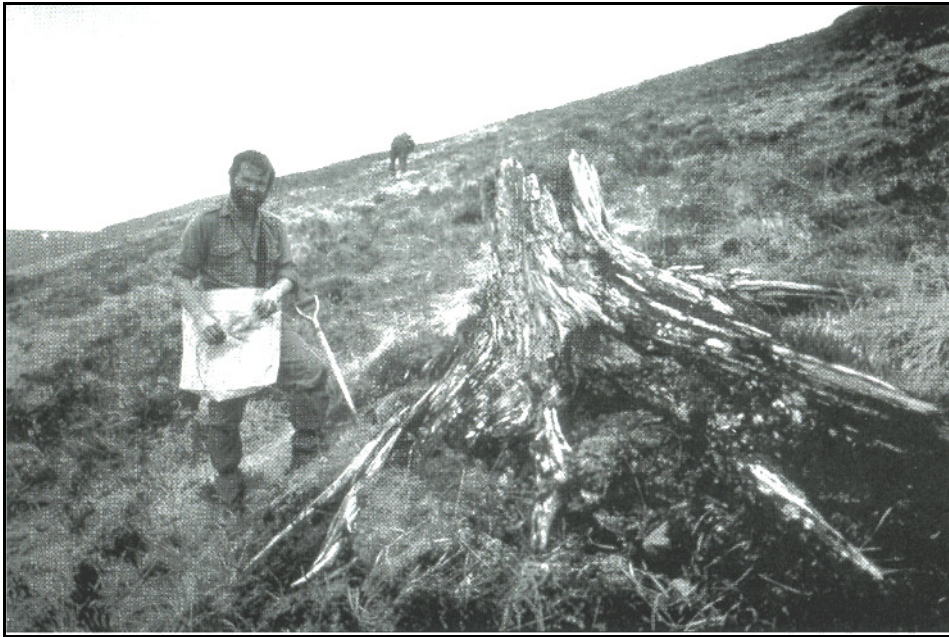


## Wild Land News (extract from)

**Glen Affric: The Return of  
Alan Watson Featherstone describes a major project to restore a forest ecosystem**



*Planting new trees alongside the stumps of old ones at Athnamulloch. (Photo: Alan Watson Featherstone).*

I first visited Affric in 1979 and, like many people, I was deeply touched by the beauty of the glen. I had not experienced such a unique combination of mountains, lochs, rivers and ancient forest in Scotland before - it reminded me more of landscapes that I had visited in Canada, rather than other places I knew of in my native country. What struck me the most was the relative wildness of the glen. There, it seemed to me, Nature was closer to free expression – what is known in the language of deep ecology as self-willed land - than anywhere else I had come across in the UK.

As a result of numerous visits in the years that followed, I developed a strong personal connection with, and knowledge of, the glen, especially the forested areas. I was particularly inspired by the regeneration of the native pinewoods taking place on the south side of Loch Beinn a'Mheadhoin, inside fenced exclosures erected by the Forestry Commission in the 1960s, and was privileged to make several visits to the glen with Finlay MacRae, the forester who was the driving force behind those projects. I could also see the potential for further regeneration of the forest in other areas of the glen, so when Trees for Life was founded, Affric became an initial focal point for our forest restoration work.

In 1990 we implemented our first major project, when, in partnership with the Forestry Commission (and with grant aid from the Nature Conservancy Council, now Scottish Natural Heritage), we funded a 50 hectare deer-fenced exclosure at Coille Ruigh an Cuileige. This area contains the largest extent of native pinewood on the north side of Loch Beinn a'Mheadhoin, and the exclosure is still unique amongst those on Forestry Commission land in Affric in that it is exclusively for natural regeneration of the trees - no other management has been done there. A survey carried out by a student from Edinburgh University before the fence was erected concluded that there were approximately 100,000 Scots pine seedlings inside the area to be fenced, and their average age was 9.9 years and their average height a mere 8.5 cm. There were also numerous (but uncounted) seedlings of broadleaved trees such as birch and rowan, and they, plus the pines, have grown well in the years since the fence was completed, with some trees now over 5 metres tall.

It's not just the trees that benefit from this protection from excessive grazing. Coille Ruigh is one of the best places in Glen Affric to find creeping lady's tresses, a rhizomatous orchid associated with the native pinewoods. Over the years since the fence was put up, creeping lady's tresses has spread and increased there, and in August this year I saw literally hundreds of them

amongst the pines on the ridge there. Outside the fence, however, just fifty metres away on the same ridge, I could only find a single solitary orchid. The regenerating trees at Coille Ruigh and other exclosures we've been involved with are now supporting increasing populations of phytophagous insects, which in turn are food for birds etc. Thus, we can see that the whole process of ecosystem unravelling in Affric has been reversed, and indeed a veritable reweaving of the web of life is taking place.

Like much of the Highlands, Glen Affric was managed for most of the past two centuries to support large (and ecologically-unsustainable) populations of large herbivores, namely sheep and red deer. At one stage there were 30,000 sheep in the glen, and although they are all gone now, their impact, and that of the deer, which remain, continues to have a profound effect on the vegetation and the land. This is obvious not only in the large generation gap in the ages of the trees (there were very few pines younger than 100 years old until restoration efforts began in the 1960s), but also through the compaction of the soil into numerous parallel hoof tracks on many of the open hillsides.

The cumulative effects of this are the suppression of the natural growth of all the vegetation communities in the glen, and the deer numbers are still too high to allow any recovery in unprotected areas. However, as soon as the grazing pressure is reduced or removed by deer-fenced exclosures, dramatic results follow. For example, from 1994 onwards we implemented a series of 10 exclosures on West Affric in partnership with the National Trust for Scotland, who own that 4,000 hectare property at the headwaters of the Affric watershed. Now, just a few years later, the difference in vegetation growth for plants such as bog myrtle and heather between the inside and the outside of the fences is so substantial that it is easily visible from the hills on the other side of the glen. We've also erected several small areas of stock fencing around eared willow seedlings beside the Affric River on West Affric, to help facilitate the restoration of the riparian vegetation community, and this year I was astonished and delighted to find bluebells flowering in one of those. These were blossoming beside a lush growth of ferns in the shade of an eared willow bush and they provided a spectacular contrast with the close-cropped, overgrazed barrenness of the surrounding land. I suspect it may be centuries since bluebells last flowered on West Affric, and their return now is a potent symbol of what Nature can do when we allow her free expression.

In all the work which we do, we seek to follow the axiom of 'letting Nature be our guide'. Close observation of the land over extended periods of time is invaluable in building up a sense of what self-willed land means for an area like Affric. Bluebells reappearing on West Affric are an indication of this, as is the presence of seedling trees there, and especially further east in the glen. Similarly, when we plant trees we do this in ways which replicate as closely as possible the process of natural regeneration, using seed collected from trees growing nearby, and planting in soil types and vegetation conditions where those tree species already occur elsewhere in the glen. Planting is done in a non-linear pattern, with clumps of trees and open space between them, so that the distribution of trees matches that of naturally regenerating forest as closely as possible.

There are, of course, discussions about how much forest there should 'naturally' be in Affric, and what the species composition of the forest should be. Historical evidence, such as the palaeoecological studies carried out on West Affric, can provide some important pointers in this direction, but the message contained in the land itself today, through the presence of heavily-overgrazed seedlings of trees and other plants, must also be factored in.

For an area like West Affric, we will probably never know how much forest there would have been there today if humans had not lived in and altered the landscape for thousands of years. What is incontestable is that there would have been more forest than exists at present, and the trees would have flourished alongside with other vegetation communities, such as grasslands, peat bogs, and indeed, bog woodland.

It was Aldo Leopold, the American forester and early advocate of wilderness, who said: "The first rule of intelligent tinkering is to save all the parts." The alteration of the Scottish landscape by humans, directly and indirectly, over millennia took place without the benefit of Leopold's insight, and today we live with the consequences of that. Most of Scotland's large mammal species are extirpated, and the ecosystems which covered much of the country - natural forests - have either been completely removed or reduced to small isolated stands of old trees. All our terrestrial ecosystems, including forests, survive today in an impoverished condition, and in most cases are unable to return to natural health and balance

because of ongoing human activities, and specifically the pressure of too many large herbivores. Any serious attempt at rewilding in Scotland, at returning some of the country to a condition of self-willed land, must therefore address these issues.



*Scots pine and view across Loch Affric, looking north towards the peaks of An Tudair and Sgurr na Lapaich. (Photo: Alan Watson Featherstone).*

At Trees for Life, our approach to rewilding is one in which we seek to put back into place the pieces of the ecosystem which are necessary for it to become self-sustaining and therefore self-willed again. Our starting point for this has been to catalyse an expansion of the native forests by facilitating the natural regeneration of the existing forest remnants. Complementing this, we also plant trees, in sites which are selected for their ecological suitability, and where regeneration is unlikely to occur because of the absence of an existing seed source. While those trees (both planted and naturally-regenerating) are growing, we advocate a substantial reduction in the grazing pressure, through the removal of sheep from areas where forest restoration is desired and a reduction in the numbers of deer to a level at which natural regeneration of the trees, and indeed all the vegetation, becomes possible without the need for further planting or the use of more fences. In the longer term, we also advocate the return of all the missing mammal species, including the predators, as they are essential components of healthy ecosystems. Indeed, we believe that we will never have self-sustaining ecosystems, and therefore self-willed land, until all the parts of the ecosystems, and especially the top predators, are back in place again.

In Glen Affric, our initial efforts focused on achieving the natural regeneration and expansion of the existing forest remnants, particularly the native pinewoods. In subsequent years, our work has diversified and deepened to include the restoration of more of the forest ecosystem - the montane scrub community at the treeline, the riparian vegetation zone, the scarce trees (such as aspen, hazel, holly and juniper) and the woodland ground flora. We are also putting back in place key parts of the ecosystem that are needed for some of the extirpated mammal species. Thus, we are implementing regeneration and restoration measures for the stands of aspen trees that occur around the shores of Loch Beinn a'Mheadhoin. This will not only benefit the rare insect, fungi and lichen species that are dependent on aspen, but also, because aspen is the preferred winter food of the European beaver, it will provide a more suitable habitat for a possible return of beavers to Affric at some stage in the future. Other work we're involved with, which is equally important for bringing back an enhanced quality of wildness, includes the removal of redundant fencing wherever possible, and we also advocate the removal and re-landscaping back to natural contours of some of the tracks and forest roads in the glen.

In a larger context, it is not ultimately a natural forest that is the primary goal of our restoration work. Instead, we seek to restore a healthy self-sustaining and dynamic ecosystem, complete with all its natural processes of herbivory, predation, parasitism, occasional large-scale natural disturbance such as wild fires, windthrow, insect infestations etc. Such a goal is obviously a long term one, but it is only by aiming for such an outcome, we believe, that we may have truly wild, self-willed land again in the Highlands.

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