

What is Ecoforestry? – a Welsh perspective

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Summary

Since writing '*Ecoforestry in a Welsh Woodland*' (*Ecoforestry*, Summer 2002), I have participated in the implementation of an ecoforestry program in Walker Creek Forest, Oregon and, with the owner Chip Boggs and professional ecoforester Jerry Becker (Footnote¹), trekked in old growth ecosystems. Opportunity to experience this depth of insight is rarely available elsewhere and provided a unique perspective for the application of ecoforestry concepts at Walker Creek. I gratefully acknowledge the influence of this on the ideas expressed here.

Experience from my Welsh woodland clearly demonstrates that it is precisely because this skill and experience are not generally available, indeed are unheard of, that prevents ecoforestry becoming accepted worldwide. It is the relationship of principles and practice that I see as crucial in defining a common approach. Here I suggest how this could be shaped and thus be relevant to my Welsh woodland.

This article is not intended to define 'Why' ecoforestry, though this is inextricably linked with the question 'What is'. It provides however a framework with which to stimulate debate that will I trust extend the understanding and application of ecoforestry. I deliberately avoid the use of technical terminology as being loaded with preconceptions which, applied to ecoforestry, can be misleading. The use of plain English is more thought provoking, essential in developing the concept of ecoforestry.

When is a forest not an ecoforest ?

Ecoforestry, by its nature, is a creative skill and a joy beyond anything found within conventional forestry. It's never dull but a challenge to everyone, owner, professional, lumberjack and public. The sheer pleasure of witnessing the forest respond vigorously is immensely rewarding.

Ecoforestry appears complex, yet in fact is very simple. Why then is it so difficult to explain to the uninitiated? What makes it so special? Why should trees not be seen as a crop, to be thinned and clear felled within decades? What's wrong with conventional clear-cuts and plantation forestry?

As a loose-knit group, we emphasise widely differing perspectives, yet would perhaps agree that we are all endeavouring to sustain healthy forests. The difficulty however is in describing how this works in practice. For some time I have attempted to define ecoforestry in a single sentence and come up with something quite different each time! This inability to define

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ecoforestry is widely expressed (various references'). Worldwide, thinking has been universally conditioned by industrial silvicultural forestry. This makes the fundamental nature of ecoforestry difficult to grasp. We thus unwittingly impose ideas that we think are right, providing **FOR** the forest, believing we know best and in the process inflicting considerable damage on the ecosystem. We have lost the skill of working in harmony **WITH** nature, assisting natural processes to flourish.

This difference of approach is fundamental, a concept I learnt in Africa advising developing communities and which strikingly underlies the difference between failure and success. '*It is clear that the crisis we face is a crisis in culture, character and consciousness*' (Dregson & Taylor 1974ⁱⁱ).

I have learnt in my broadleaf woodland that if I get my intervention right, nature will do much of the work for me. When I get it wrong, going against nature, I would need to employ six woodmen to keep pace with the work that is generated. More than that, if my intervention is right I, in effect, accelerate the natural processes of recovery and restoration. With industrial forestry, the kick back can be very hard indeed with considerable losses. I never accepted a government '*restocking grant*', for that would require my creating clearings and artificially restocking, for intuitively I felt this to be inappropriate for my ancient woodland. Now I know why and can feel where my wood is tugging me! The truth is that we understand relatively so little about the workings and interdependence of the components within the forest ecosystem that we depart from and contradict natural processes at our peril (Kendrick 2001ⁱⁱⁱ).

What are healthy forests ?

If I ask- "what is your principle objective with your forest?" and you answer- "restoring its health", then you are likely to be practicing ecoforestry. If you answer "extracting lumber", "paying off the loan", then chances are you are not. To the question "What does ecoforestry mean to you", responses were diverse and of necessity somewhat vague, yet clearly indicated a common concern for forest health (References 1). The dictionary defines '*eco*' as being '*relative to their surroundings*' and '*forestry*' as '*the science of trees*'. Put together these place the trees in the context of their ecology (ecosystem). Rachael Carson points out that everything in nature is related to everything else (Carson 1962^{iv}).

One definition I came across however addresses what I believe to be the essence of ecoforestry. Ecoforestry, it states, "***applies the ecological processes of natural old-growth forests as a model to guide the design of managed forests***" (Jerry Becker). To me this clearly expresses the basic philosophy underlying the ecoforestry concept of healthy forests. It applies equally to my Welsh woodland, even though there are no immediately visible and identifiable old growth features.

Hence, old growth structures-

- ❖ **sustain the forest in perpetuity** incorporating the full cycle, from seedling to maturity to decay and recycling, a process taking many hundreds, indeed thousands of years. Clear-felling, single species crops, plantation practice are clearly unacceptable.
- ❖ **work in harmony with nature** and like organic farming, leave a light footprint, whereas conventional silviculture uses heavy inputs of labour, machinery and chemicals and is concerned only with the adolescent stage of the tree's life as lumber.
- ❖ **are integral to the forest ecosystem wholistically** and the more healthy and vibrant the ecosystem, the more diverse the habitats (to use the jargon). Not the other way round.
- ❖ **restore damaged forests** even when deficient in old trees, deadwood, healthy soil, etc. and burdened with intrusive introduced species, etc.

Additionally-

- ❖ **guide the planting of new forests** important in establishing a healthy forest ecosystem.

A further dimension is added by the Ecoforestry Programme in the Solomon Islands (http://www.commerce.gov.sb/IRS/SIDT_EFU.htm). "Ecoforestry" it states, "is a way to look after your forest, lands, rivers and reefs, so they can support you and your grandchildren." We can perhaps learn from one other!

Thus, by inference, ecoforestry also-

- ❖ **establishes a new relationship between ourselves and the forest** emphasising a new understanding that puts the forest first and ourselves second;
- ❖ **emphasises need for education, research and demonstration** through set-a side forests cared for by understanding owner/ worker co-ops;
- ❖ **generates a new forest culture** of the 21st century defining our responsibilities;
- ❖ **guides what we can reasonably take** without damaging the ecosystem. What however is surplus to nature's ecosystem? It is clear however that to simply relates this to volume increment is insufficient.

How should we apply old growth characteristics ?

Old growth features are very evident in Oregon- ancient trees (eg The Doerner Fir (Footnote²)), stumps of gigantic proportions, humps and hollows, fauna and flora, etc, for it is only 150 years or so since you cut the big trees and settled the land. In Britain and Western Europe no original wildwood remains, for it has all modified by man and silvicultural practice imposed for 2,000 years and is now almost unrecognisable (eg John Evelyn's *Silva*). Great trees

² The Doerner Fir, said to be the largest surviving Douglas Fir in the world is midway between Roseburg and Coos Bay, Oregon. Leaflet from BLM tel. (503) 756-0100. The author describes this and the surrounding devastation in a newsletter home this summer- copies from Iliff@btopenworld.com

are now rare indeed. My woodland has none, for they were cleared two hundred years or more ago with corresponding loss of nesting habitat, insects and lichens to this day. As a result, I suggest that our ancient woodlands should be regarded as so precious that no wood is taken away for at least five hundred years to support the restoration of the ecosystem!

There are however features of the original wildwood to be discerned in the present day ecosystem of our ancient woodlands, if only we could be more understanding of what the forest is trying to indicate to us. There is for example, more than one genetic source of sessile oak; there were once native conifers and which may have acted as the nurse cover; there is only one species of woodland butterfly, indicating perhaps a more diverse and open forest. Of particular relevance are the conditions in which trees regenerate; oak likes a thin cover of grass; ash seeds under cover, never in the open; cherry requires light and baby trees, I observe, do best within a light cover of bramble.

So it is that I, as a Welsh ecoforester, am learning how to work with these features that have presumably evolved from the original wildwood. This learning process often succeeds best when we stop, sit and relax, however briefly. It is then, in the quiet of the forest, that we make our most profound and influential observations.

Forest education

There is great need to make people conscious of forest health, both the public and ourselves. The average person in the northwest is better informed about forest issues than their counterpart in Britain. Here, it has happened to me when cutting a tree, that someone leans over the fence and shouts '*Save the rainforests!*' I'm very supportive of people opposing clear cuts, but there must be a practical alternative in the public mind in order for our message to be heard. Ecoforestry inherently offers this opportunity.

For our part, as owners and workers, we have much to learn about restoring and caring for healthy forests. The complexity of the forest ecosystem and that we know relatively so little about how it works, presents a considerable challenge. Add to this that certification (FSC Principles and Criteria), of necessity, is largely market orientated and whilst alluring to forest health, does not actually address how this should be implemented. There is also a noticeable absence of research material relevant to us as ecoforesters.

All this points to the need for a comprehensive educational approach. We should encourage people to come and visit working ecoforests. That we can cut trees and actually improve forest health can be a great surprise. Only recently was the major countryside agency here in Wales persuaded of this logic! The Ecoforestry Institutes' venture with Wildwood on Vancouver Island is a significant step in this direction and one that must be replicated by practicing ecoforesters throughout America and worldwide. Even forest owners can benefit from such visits. The

possibilities for research material is well illustrated by Bryce Kendrick's article '*Fungus Roots in the Forest*' (Ecoforestry, Summer 2001). There is great need for more of this. It does exist but is frequently hard to locate, something I am currently exploring (Footnote³). So it is that the concept and definition of ecoforestry is tightly bound in with the need for education.

Implementation in the forest

I observe that ideas drafted standing in the forest are always a lot more relevant than anything written sitting at an office desk. It is with this intimate experience and understanding that we are able to identify the features that must be taken into account. Thus, surveying the health of the forest based on the components of the ecosystem; large trees, dead snags, downwood, soil health, regeneration, area, size, etc, forms a crucial basis from which to plan, such as I witnessed in Walker Creek Forest this summer. (Becker 1996').

This '*ecosurvey*' provides the opportunity to relate what is there to the definition of ecoforestry. There is a good indication as to how this could work in Egon Ronay's quality star system for restaurants. This is not some hypothetical rating based on expectations, as with timber certification, but which reflects that which has actually been achieved, encouraging participants to strive for a higher rating. Surprisingly this concept applies equally well to forest health. But more than this, if based on the key components of the *ecosurvey* and incorporated into the forest stewardship, this relates practice directly to the health of the forest and thus the star rating. Hence the owner and professional would know what had to be incorporated so that the forest qualifies as an ecoforestry project. Thus, a Five Star rating would be the very best, indicating- some old growth with a healthy ecosystem and a plan implementing full old growth structures; Four Stars- old trees, great diversity and a forest that is restored to ecoforestry principles; Two- a heavily logged forest with giant stumps that is in the early stages of restoration, and One- not an old growth site being restored to health.

The key must be that intervention has already started for it to be classified as ecoforestry. Thus it would not be a hypothetical '*sustainable*' forest, certified by an 'approved' consultant before any work is done. This practice is widespread and has, I suggest, muddied the forest, prompting the implementation of work which cannot be described as ecoforestry.

The system, because of its simplicity lends its-self to self-assessment, avoiding the bureaucracy that otherwise ensues (self-assessment is successfully established in Britain for tax returns and straight forward to use). This would allow those like myself, small-scale owners denied access to certification and without recourse to an ecoforester, to make their own assessment and gain an ecoforestry star rating that is internationally recognised.

³ The author would be grateful to hear from people who have or know of sources of material relevant to ecoforestry. His address is at the end of this article.

This system, regulated by such as the Ecoforestry Institute, could award an ecoforestry logo that the owner displays to show that theirs is a healthy ecoforest. Thus, self-regulatory, uniform standards could be applied and maintained. The public, on coming to recognise the significance of the logo, will learn to respect it as a mark of forest health.

So what is ecoforestry ?

Just as the concept of organic farming applies worldwide, so should ecoforestry, it being the forest equivalent. There is therefore great need for a common definition and understanding that applies to ecoforestry projects around the world. So I humbly suggest-

Ecoforestry

the skill of working in harmony with nature to create sustainable productive forests

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Hence, this definition provides a framework that has striking relevance for all forests, new and old, large and small and applies worldwide. It has caused me to rethink my whole approach to the stewardship of my Welsh woodland and to question many of the practices and official policies that prevail here in Britain. My progress with a new stewardship strategy for my woodland, that has grown out of these articles is challenging, providing new insight and great possibilities into the potential of my ancient woodland.

The application of ecoforestry thus defined is in fact very simple. Once we grasp that ecoforestry is actually central to the forest and that it is conventional silviculture that is on the periphery. The way then becomes clear and a new public perception is possible, not one that says 'Don't', but one that grasps that there is an alternative creating healthy forests for posterity.

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Iliff would welcome comment and observations on the ideas expressed here and to hear from people here and in other parts of the world working in similar ways. His email is- iliff@btopenworld.com (Please note change of address).

He is further more grateful to Beethoven whose instrumental music proved a major source of inspiration in committing this article to paper.

References:

ⁱ Ecoforestry Discussion List 25th January 2001- 'What does ecoforestry mean to you?', Ecoforestry Institute www.ecoforestry.co/intro.htm and various articles in the Ecoforestry journal.

ⁱⁱ Ecoforestry - the Art and Science of Sustainable Forest Use, Ed. Alan Dregson & Duncan Taylor, 1997 p.274.

ⁱⁱⁱ Kendrick B, '*Fungus Roots in the Forest*', Ecoforestry, Summer 2001 pp.20-23.

^{iv} Rachael Carson, *Silent Spring* 1962.

^v Becker J&R- *Think Monitoring First to Guarantee Sustainability of Ecoforestry Practices*, International Journal of Ecoforestry, 1996;12(1). pp.185-187.