

Ecology and Management of Large Native Pinewoods: Past, Present and Future

14th to 16th June 2004 - Drumnadrochit, Scotland

Conference report

The impetus for this meeting came from a desire to celebrate the designation of Glen Affric as Scotland's newest National Nature Reserve and to hold a follow up to the last great pinewood gathering "Our Pinewood Heritage" held in Inverness in 1994.

The aims of the conference were to:

- Bring together researchers, land managers and those in the local community with an interest in pinewood ecology and biodiversity
- Share experiences and information
- Review progress to date
- Identify future research, conservation and restoration priorities.

Reviewing progress over the last ten years, it is clear that while targets for the establishment of new native pinewoods have been exceeded, more work is needed on pinewood expansion, restoration and improvement in condition. There is a debate about how ambitious we should be, especially in relation to expansion, given that semi-natural open ground will inevitably be lost to woodland, resulting in possible negative impacts on biodiversity. There are also differing views about how existing pinewoods should be managed – leave to natural processes or intervene to modify forest structure, tree composition and dynamics.

Site specific solutions will be part of the key to resolving these dilemmas, but the extensive pinewoods of western Norway provide some clues as to how Scottish pinewoods could look in the future. Norwegian pinewoods are subject to large climatic gradients over short distances where the wet oceanic pinewoods of the west grade over a few tens of kilometres to the dry, continental pinewoods of the more easterly inner fjords. Pinewood dynamics also change markedly in relation to this gradient, the oceanic pinewoods being subject to wind disturbance – the continental pinewoods more affected by fire. Many of the northern Scottish pinewoods are subject to similarly short climatic gradients, which undoubtedly affect growing conditions and ecosystem dynamics.

The issue of climate change and its influence on the pinewood ecosystem was a major area of debate in the conference. Historical research emphasised the profound effect that changes in climate – and associated short-term extreme events, can have on forest development. In Glen Affric particularly, the dominance of pine has waxed and waned in response to climate and human disturbance, with cold wet periods associated with loss of pine to blanket bog, and warm dry periods promoting increased abundance of broadleaves on better soils. The success of present day pinewood projects will hinge on taking into account current weather and climate change models.

Discussions over the three days of the conference also revealed how little we know about the biodiversity of Glen Affric and other northern pinewoods compared to the likes of Abernethy and the Strathspey pinewoods. For example, fungal, lichen and invertebrate assemblages have been little studied, particularly those associated with deadwood and uncommon trees such as aspen. The debate continues as to whether these habitats should be artificially enhanced, and key species translocated in the landscape to speed up the restoration process. Such activities should ideally be informed by a robust understanding of the interrelationship between different components of the ecosystem. Our understanding of

the effects of disturbance on stand structure and regeneration is improving raising the prospect of improved models of stand development and dynamics. At the more detailed level, research on the monoterpene composition of pine foliage is beginning to reveal a fascinating link between chemical diversity and the diversity of invertebrate, fungi and plant communities; demonstrating a direct correlation between genetic and ecosystem level processes.

When it comes to **pinewood management** the vision is long-term, 100 years or more being a suitable time frame. The vision has to be open-ended to allow not only the forest to develop and evolve, but also permit peoples' aspirations about what they want from their pinewoods to evolve as well. Local community involvement and interest in management issues is at an all time high, and there is active participation by community groups in the planning of management activities in Glen Affric. One of the main action points is to find more effective ways of involving local communities in the research underpinning current management. There is a need to make the process of how research findings are integrated into management more transparent to a wider range of stakeholders. On the issue of forest use and rural development, the recent rise in eco-tourism is revealing the tensions between desires for increased development/economic prosperity versus low key informal recreation use/quality of life. Resolving these tensions while keeping all parties bought into the process will be a challenge.

In conclusion, the conference was undoubtedly successful in bringing together a wide range of interest groups and sharing information. Holding the indoor session within the Glen Urquhart Community Centre, brought conference delegates into the heart of the local community and allowed scientists, managers and community representatives to engage in productive dialogue and discussion. As noted in both the opening and closing addresses to the conference, this consensual approach marks a changed attitude to pinewood issues. No longer do the special interest group, the academic researcher or professional manager work in isolation; there is now a shared vision of how pinewoods should be conserved and managed, and a commitment to work together to solve outstanding differences.