

## **Old Caledonian Pinewood by Dunlop, Balharry and Watson, July 2013**

### **Note by Ramblers Scotland**

**This paper has been commissioned by Ramblers Scotland because of increasing concern over the future of native pinewoods in the Cairngorms National Park. These pinewoods are remnants of the ancient woodlands of Scotland, generally known as the Old Caledonian Pinewood, and found in various parts of the Highlands. They are directly descended, over thousands of years, from the original forest cover that was established after the last Ice Age. The largest and most natural tracts are found in the Cairngorms National Park to the east, north and west of the central massif.**

**The OCP is of enormous biological, historical and conservation value. A walk through these ancient woodlands provides an opportunity to experience the forest ecosystem in as natural a condition as is possible in the UK. Protecting these ancient remnants and allowing them to flourish and expand into surrounding areas should be a top environmental priority for Scotland. But in too many places the OCP is not in a sound ecological state and is not expanding in the way that it can.**

**Foremost amongst the concerns are proposals by the Royal Society for the Protection of Birds to expand the OCP in the northern Cairngorms through planting. While this would establish new areas of native woodland it would not meet the essential criterion that defines the OCP - tracts of native pinewood, dominated by Scots Pine (*Pinus sylvestris*), that have been established, from one generation to the next, by the natural regeneration of the existing remnants. It is natural regeneration, not planting, which is the key characteristic of these native pinewoods.**

**RS have asked the authors to review the RSPB proposals and consider how these relate to long standing policy and practice in the protection and expansion of the OCP in the Cairngorms and to indicate whether these proposals are in accord with public expectations for the future protection and enjoyment of this critically important section of the National Park.**

**RS chose the three authors to undertake this work because of their long experience of nature conservation and woodland management issues in the Highlands of Scotland and the recognition that they have been among the leading experts in advising on OCP management and restoration over many years.**

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**STATEMENT OF CONCERN OVER METHODS TO EXTEND THE OLD CALEDONIAN PINEWOODS**  
**Paper prepared by Basil Dunlop, Richard Balharry and Dr Adam Watson**  
**July 2013**

**Proposals**

The Royal Society for the Protection of Birds plans to plant trees to link fragments' of the Old Caledonian pinewoods in the Cairngorms, Scotland's finest, as one of its 'Futurescapes' projects. The RSPB claims that 'linkages are essential to ensure the resilience and sustainability of the forest'. A recent application for funding announced a project 'to reconnect two remnants of the Caledonian Forest (Abernethy Forest and Glenmore Forest) in the heart of the Cairngorms National Park through the planting of thousands of native trees'.

This paper explains why the RSPB proposals are a conspicuous departure from previously agreed policies in the Cairngorms and would damage the integrity of the Old Caledonian pinewoods owned by the RSPB. The proposals should be resisted, not only because of the damage they would bring to the RSPB's own land, but also because there is a risk that other land managers may be tempted to follow the RSPB's unwise example, increasing the danger to other Old Caledonian pinewoods in larger tracts of the Cairngorms.

**Pinewood Integrity**

Such proposed human interference would degrade, not restore, the genuine Old Caledonian pinewoods, because the latter's main characteristic and value lie in natural history and forest ecology. It is unique because its parts have escaped the fate of almost every area of former woodland in Britain below 600m – felling, fencing, draining, cultivation and planting. Genuine Old Caledonian pinewoods have **NOT** been planted, and need space to expand naturally. The criterion for authentication and classification as a genuine Caledonian pinewood is universally accepted as '**descended from one generation to another by natural means**' in an unbroken chain within the same locality since thousands of years ago after the last ice age. This is the fundamental principle which makes the Old Caledonian pinewoods so special. Any planting automatically compromises their integrity forever and negates this distinction, which is the highest form of woodland classification. The extant remnants and their adjacent treeless areas are vital to allow the natural expansion of the pinewoods as a highly dynamic ecological process of enormous scientific value. Even if the time-scale is shorter, planting quotas are totally artificial, and cannot be set according to guesses about forest composition at some point in the distant past, when the climate was more benign. Present-day boreal forests in Fennoscandia on similar soils of granite-derived glacial deposits are often single species pinewoods of Scots pine, or have few trees of broadleaved species.

**Dynamics and Connections**

Because pine and birch are pioneer species, they tend to form dense even-aged blocks. Their dynamics of natural extension and movement require adjacent currently treeless regeneration zones to expand, because the seedlings do best outside the woodland where conditions are more open and not densely shaded. In natural boreal pinewoods this is provided through fire, windblow and soil erosion, and the different stands eventually die from disease or old age. Planting in these adjacent regeneration zones would forever deny them Class 1 Caledonian pinewood status. The Old Caledonian I pinewood remnants on the northern and western slopes of the Cairngorms - Abernethy, Glen More, Rothiemurchus, Invereshie and Glen Feshie, are already connected, because there has been prolific natural regeneration in the last few decades, and species such as capercaillie and wildcat, insects and plants can and do move between them, as does tree pollen and tree seed on the wind and on frozen snow.

Although artificial connections established between isolated planted pinewoods elsewhere in Badenoch & Strathspey by planting might be beneficial by creating larger and possibly more diverse woodlands, there is no justification for this in the main Old Caledonian pinewood band from Abernethy south to Glen Feshie. These and other parts of the Old Caledonian pinewood are already regenerating well since the reduction of grazing pressure from red deer and sheep. An intensive survey (Dunlop 1994) identified 2,155ha (hectares) of new natural regeneration in the 40 years since the 1950s research. This was a 36% increase on the previous 5,948ha of authenticated established mature and uneven-aged Old Caledonian pine. An example of this expansion is highly visible from the ski road on Cairn Gorm above Glen More. It is a superb example of nature at work, with high value for amenity and public enjoyment as well as for ecologists, as a new tree-line is created naturally.

### **Principles and Policies**

Previously agreed principles of restoration by natural regeneration and policies of minimal intervention and a presumption against planting, which safeguarded the Caledonian pinewoods from degradation or loss, appear to have been ignored by the RSPB, with inadequate consultation or discussion with forest ecologists. These well-established policies had been introduced after research had revealed an alarming lack of protection for the Caledonian pinewoods, which had led to massive losses from felling and planting, rather than natural regeneration.

In the 1950s forestry lecturers and students at the University of Aberdeen carried out research to record the Old Caledonian pinewood remnants. They identified 35 sites, some being little more than small stands of old trees. Their findings were published by Prof Steven and Dr Carlisle in *The Native Pinewoods of Scotland*, 1959. The Nature Conservancy, concerned for the future of these pinewoods, began an investigation in 1969 into their condition. This along with other surveys revealed that only 1600ha could be classified as reasonably well stocked, only nine pinewoods exceeded 40ha each, and only two exceeded 80 ha each. Out of 416 sample plots, 58 had been degraded from pinewood to plantations of conifers alien to Britain, and 19 showed evidence of recent felling of the Caledonian pines. All this had occurred in just 15 years since the survey work carried out by Steven & Carlisle and others.

Shocked at the results, in 1973 The Nature Conservancy and Institute of Terrestrial Ecology created The Native Pinewoods Discussion Group, comprising government agencies, voluntary organisations and private landowners involved in forestry, forest ecology, and conservation. After a symposium at Aviemore in 1976, principles and policies were established to protect the remnants, notably minimal intervention management and restocking by natural regeneration, with planting only as a last resort. Buffer and regeneration zones to allow natural expansion onto treeless land outside the pinewoods were advocated.

Eventually the Forestry Commission published *Native Pinewoods Grants and Guidelines* (1989) and *Native Pinewoods – Forestry Guide 7 – The Management of Semi-Natural Woodlands* (1994), and *The Caledonian Pinewood Inventory* (1994), in an effort to identify and protect the Old Caledonian forest. These schemes had important limitations, partly due to the introduction of *New Native Pinewood* schemes for the planting of new pinewoods This was confusing. *The Cairngorms Working Party Report* (1992) advocated conservation, improvement and expansion of the existing native woodlands, primarily by natural means. At the Ballater Conference in 1993, John Hunt, then RSPB

Senior Conservation Manager (Scotland) and a former board member on the Cairngorms Working Party, stated “What is crucially important is to ensure that these new woods are largely established by natural regeneration from the existing remnants of natural woodland”.

### **Small extent of Old Caledonian pinewood in Badenoch & Strathspey**

Badenoch & Strathspey contain the largest blocks of Old Caledonian pinewood that are left in Scotland. Despite this, the most recent survey by Dunlop (1994) recorded that out of a total of 30,265ha of pinewood in Badenoch & Strathspey, only 8,620ha or 28% comprised Old Caledonian pinewood. So although the overall area of native pine woodland in the district is the highest it has been since before 1500AD the proportion of this which is Old Caledonian pinewood is low.

### **Conclusions**

Efforts to extend the native Old Caledonian pinewood by natural means are commendable. However the current RSPB approach at Abernethy is unacceptable. It blurs the distinction between native pinewood, which can be planted, and Old Caledonian pinewood, which is directly descended from the post-glacial boreal forest by natural means of self-seeding, and therefore cannot be recreated by planting. It can be extended only by natural regeneration on to nearby treeless land which had been previously Old Caledonian pinewood. **Any** planting would forever destroy the naturalness of the site, break the chain, and devalue scientific study or appreciation of natural future extension. It is the entire eco-system of the Old Caledonian fragments that is vital for future management. The very rare and extremely valuable Old Caledonian remnants in Badenoch & Strathspey are the most extensive and impressive of the Scottish and therefore British pinewood remnants. It is the amazing web of life that is the wonder of this living treasure. Claims by organisations that they are restoring or extending the Old Caledonian pinewoods by planting are therefore false and not credible.

The stated intention to 'save' 300 years is unjustified. The Old Caledonian pinewoods have been in decline due to climatic changes and human intervention (especially planting) for 7,000 years. It is not therefore necessary to intervene to try to reforest this, the most sensitive location, within 200 years, when nature has already demonstrated its great capabilities over the last 50 years. Planting here has been rejected as an option since the 1970s. Especially in the Year of Natural Scotland, responsible forest ecologists and conservationists should honour previous policies of minimal intervention and the precautionary principle. They should do so by prohibiting planting in this priceless and fragile area, and take no action which would prejudice options for future generations.

**BMSD, RB & AW 24/7/2013**

### **ADDENDUM**

#### **Forest History**

From 10,000BC, as the ice sheet retreated in a warming climate, Scots pine (*Pinus sylvestris*) and other tree species advanced, creating a vast boreal forest stretching across northern Eurasia from China west to the Atlantic. With our oceanic climate, a distinctive variety of pine evolved in Scotland, compared with the continent. The forest reached its maximum extent around 5,000BC in a benign climate, covering much of northern Scotland – the Forest of Caledon.

Further change to a wet and windy climate caused forest contraction, the formation of blanket peat, and the altitudinal lowering of the tree-line, considerably reducing the area of forest by 2,000BC, when a growing human population in the straths and glens began to clear woodland for pasturing domestic livestock and for cultivating crops. Thereafter the forest served local needs for building timber, fuel, agriculture and shelter, restocking by seeding from retained trees and adjacent stands, inhibited by the grazing of domestic stock. By 1500AD timber was being floated down the Spey to supply more distant markets, and there were large-scale fellings. Although some fellings were successful, others failed due to the difficulty and cost of extraction. Many of the smaller and more accessible woods did not survive, but in larger forests such as Abernethy and Rothiemurchus there was good regeneration. This continued through the Napoleonic Wars until 1866 when the removal of tax on timber imports made them considerably cheaper than local timber. Then, in the depleted and

less accessible upper pinewoods, landowners cleared farm tenants and designated the land as deer forest. The present mature pinewood blocks date from natural regeneration before the deer numbers rose high enough to prevent regeneration.

From 1763, the techniques developed for production of pine seedlings enabled large-scale commercial planting to occur. This was the method used to restock felled areas in more accessible areas, breaking the chain of natural succession. When the early plantings matured, they provided the required timber, taking the pressure off the natural pinewoods, as now.

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#### References:

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#### Notes:

1. The RSPB proposals would involve the planting of 72,000 native trees over a 10 year period in two areas, one of 590 hectares near to the existing forest in which 60,000 trees would be planted and another area of “pioneer” planting of 216 hectares in which 12,000 trees would be planted. In all of these areas the forest is already expanding, through natural regeneration, up to the natural tree line.
2. The authors note recent material on the RSPB website that has been stimulated by the comments of the environmental writer, George Monbiot, on the unnecessary extent of human interference in natural processes. We hope that such considerations will lead to a reassessment by the RSPB of their planting proposals in Abernethy.

<http://www.rspb.org.uk/community/ourwork/b/martinharper/archive/2013/06/16/one-big-thing-for-nature-a-comment-on-george-monbiot-s-book-feral.aspx>

[www.rspb.org.uk/community/ourwork/b/martinharper/archive/2013/07/15/going-wild-a-guest-blog-from-george-monbiot.aspx](http://www.rspb.org.uk/community/ourwork/b/martinharper/archive/2013/07/15/going-wild-a-guest-blog-from-george-monbiot.aspx)

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**Author "The Native Woodlands of Strathspey", Scottish Natural Heritage Research, Survey and Monitoring Report No 33, 1994.**

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**Former President of Ramblers Scotland, Former Chair of John Muir Trust, Former Interim Chair of National Trust for Scotland, Former member of Scotland's Environmental Protection Agency - North Board and the first Chair of Cairngorms National Park Local Access Forum.**

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**Most relevant are:-**

**Nethersole-Thompson, D; Watson, A (1974). The Cairngorms: their Natural History and Scenery. 286pp. Collins, London.**

**Watson,A; Hinge M (1989). Natural tree regeneration on open upland in Deeside and Donside. 28pp + maps. Institute of Terrestrial Ecology, Banchory.**

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